PRACTICAL DRILLS
IN
RAPID CALCULATION

HENRY & KEAST

TORONTO
SIR ISAAC PITMAN & SONS (CANADA) LTD.

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PRACTICAL DRILLS
IN
RAPID CALCULATION

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ORAL EXERCISE 1.

To be retained in the pad, for frequent practice.

There is no one process with figures which is as frequently used by the business man, and especially the bookkeeper, as addition. If the student is to develop accuracy and speed in this work, it is vital that he should drill repeatedly on these first exercises, until the answers can be given as mechanically as one learns to strike the correct keys of a piano or a typewriter. It is just as important that he should recognize at a glance a certain group of figures, as it is that he should recognize a certain group of letters which form a word.

In our decimal system of notation there are ten digits, including 0. In the process of addition these may meet us in one hundred possible pairs. These pairs are shown below, and the student should go over them again and again, both mentally and by giving the sums aloud, until he can finish in one minute or less.

6	9	8	9	7	5	9	3	2	4	3	5	7	7
9	5	5	6	9	8	7	9	3	8	2	9	5	8

7	9	8	2	7	9	8	8	5	6	9	3	6	3
1	4	7	2	3	8	6	3	7	8	3	4	2	3

2	0	8	4	6	0	0	4	0	0	5	0	1	5
6	6	0	9	7	4	9	6	3	8	3	7	9	6

0	6	3	6	6	4	9	8	3	0	7	1	8	7
1	0	8	3	6	7	0	9	7	5	0	7	4	4

2	3	2	3	0	4	3	6	8	2	8	2	1	2
8	6	5	0	2	4	5	1	8	9	2	0	6	7

5	1	4	7	9	2	5	7	4	5	9	4	6	4	1
2	0	3	2	1	4	1	6	1	0	2	0	4	3	2

7	5	9	0	1	4	1	1	4	1	1	3	5	8	7
2	2	9	0	4	5	5	8	2	3	1	1	4	1	7

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ORAL EXERCISE 2

To be retained in the pad, for frequent practice.

Two of the easiest numbers to add are 10 and 20. When one is adding a column of figures, he should try to recognize those combinations of two or three digits which produce sums of 10 or 20, and then mentally add this to the previous total. The following groups give sums of 10 or 20 (other groups, of course, could be made by altering the order of the digits in any one of these given groups).

					1	1	1	2	1	2	2	3
9	8	7	6	5	1	2	3	2	4	3	4	3
1	2	3	4	5	8	7	6	6	5	5	4	4

2	3	4	4	5	5	6	6
9	8	7	8	6	7	6	7
9	9	9	8	9	8	8	7

In the exercise below, the student will at first recognize mentally the sum of two numbers, and will then combine the third number with this sum. As he becomes more proficient he will omit this step, and will form at once a mental picture of the sum of the three numbers. Aim to complete each horizontal row, below, in ten seconds or less.

8	4	8	3	6	6	4	8	9	9	7	3	9	1
2	9	9	3	9	5	4	3	8	6	9	8	3	7
7	4	7	4	8	4	6	2	1	4	3	7	8	3
5	6	2	6	3	9	6	8	2	4	5	8	7	8
4	8	6	8	8	2	3	7	9	3	9	4	9	9
5	2	7	6	2	8	7	3	9	8	8	8	3	7
1	4	9	3	5	6	5	4	9	6	9	6	4	5
8	9	9	5	9	2	8	7	6	6	4	7	9	8
4	7	7	2	6	9	7	7	8	7	2	7	5	6
9	4	7	4	8	9	3	7	9	7	2	8	3	7
6	8	5	5	5	7	4	8	5	7	7	8	7	6
2	7	9	8	9	4	4	3	6	3	5	9	8	9

ORAL EXERCISE 3

ADDITION

Keep this page in the pad, for frequent mental speed drill.
Aim to complete the exercise in two minutes or less
In each line, practise adding both from the bottom and from the top.

(1)	11	19	16	14	13	18	15	12	17
	8	3	7	9	8	9	8	6	9
(2)	14	19	16	24	23	18	26	22	29
	7	5	9	7	9	7	6	9	6
(3)	17	21	25	18	29	28	39	36	32
	7	8	8	6	3	8	8	9	7
(4)	45	53	47	56	39	46	52	67	59
	8	9	7	8	6	6	9	8	9
(5)	78	59	45	69	75	54	37	52	53
	3	7	7	3	9	7	9	6	8
(6)	68	52	49	62	29	56	47	23	34
	8	9	8	9	2	6	7	5	4
	9	3	3	4	7	5	6	7	9
(7)	5	4	4	8	5	7	4	6	5
	9	3	9	5	4	3	9	7	7
(8)	8	8	3	7	8	9	3	8	8
	3	5	5	9	3	2	2	3	6

ORAL EXERCISE 4

ADDITION OF TWO NUMBERS OF TWO DIGITS EACH

Make no marks on this page. Keep this page in the pad for mental speed drills.

It is often very important that the sum of two numbers of two digits be recognized at a glance. Practise until you can complete the exercise orally in less than three minutes.

(1)	17	32	23	31	43	21	17	28	32
	21	56	15	28	18	15	18	13	14
(2)	34	48	19	34	57	47	36	54	21
	19	15	26	24	18	23	17	26	40
(3)	50	28	37	59	31	26	19	23	68
	25	51	16	28	17	34	19	29	33
(4)	78	29	16	31	71	52	35	18	65
	39	14	38	45	34	25	47	27	33
(5)	52	32	29	32	29	46	53	45	37
	29	61	19	56	17	13	27	18	19
(6)	12	34	29	80	57	78	18	13	27
	49	56	31	25	17	15	26	26	28
(7)	14	29	63	28	77	54	26	33	47
	37	36	28	58	27	48	57	62	18
(8)	25	91	77	43	18	56	74	84	63
	42	34	29	16	29	26	23	19	61

ORAL EXERCISE 5

VERTICAL AND HORIZONTAL ADDITION BY GROUPS

Keep this page in the pad for frequent practice.

The lines in the exercise are to assist you in adding, *not singly*, but *in two's*

Thus, adding the left hand vertical row *downward*, we have:—11, 21, 32, 47, 54, 68, 79, 88, 101.

Adding the upper row horizontally, left to right, gives:—7, 17, 28, 37, 45, 53, 65, 78, 87.

5	2	6	4	8	3	7	2	5	3	6	2	8	4	7	6	4	5
6	5	8	2	5	5	4	9	3	7	3	4	5	8	6	2	7	3
8	3	7	6	5	2	6	3	2	5	9	3	7	4	5	3	8	3
2	6	7	5	8	2	3	9	8	4	6	5	2	7	3	8	2	9
6	5	4	8	2	9	3	3	5	4	2	7	3	6	9	2	5	8
5	9	3	7	4	8	8	3	7	8	5	8	6	3	8	7	9	3
9	5	6	9	5	2	9	2	4	3	5	6	4	4	4	9	6	8
6	2	5	8	3	6	3	8	7	9	3	2	6	3	9	2	7	9
3	7	2	3	7	5	7	6	7	7	2	9	9	2	6	6	4	3
4	9	6	2	8	5	5	2	8	2	7	7	5	8	7	2	6	8
8	3	8	5	9	2	5	9	7	7	5	3	6	2	5	3	4	9
6	9	7	3	3	6	6	3	5	9	2	6	7	9	7	7	9	2
7	5	5	8	6	3	8	7	4	4	9	9	8	2	6	3	8	2
4	3	6	7	7	2	9	3	3	8	6	5	8	7	5	7	2	7
2	6	8	4	4	8	7	5	9	9	6	7	5	3	9	9	7	2
7	4	2	9	5	9	2	8	3	8	4	9	6	7	6	3	7	6
8	3	6	5	6	4	7	6	5	8	3	3	8	2	5	8	3	5
5	7	8	8	5	7	6	2	6	3	8	7	2	9	2	8	7	9

Date.....

Name.....Class.....

Time.....

EXERCISE 6

ADDITION

1. Begin at 2 and count by 3's to the first number greater than 60.
   Answer.....62
2. Begin at 1 and count by 6's to the first number greater than 70.
   Answer.....
3. Begin at 4 and count by 5's to the first number greater than 80.
   Answer.....
4. Begin at 3 and count by 7's to the first number greater than 70.
   Answer.....
5. Begin at 2 and count by 4's to the first number greater than 60.
   Answer.....
6. Begin at 3 and count by 8's to the first number greater than 100.
   Answer.....
7. Begin at 1 and count by 9's to the first number greater than 100.
   Answer.....
8. Begin at 5 and count by 7's to the first number greater than 90.
   Answer.....
9. Begin at 4 and count by 6's to the first number greater than 90.
   Answer.....
10. Begin at 5 and count by 9's to the first number greater than 100.
    Answer.....
11. Begin at 5 and count by 6's to the first number greater than 80.
    Answer.....
12. Begin at 2 and count by 7's to the first number greater than 90.
    Answer.....
13. Begin at 1 and count by 8's to the first number greater than 90.
    Answer.....

Date.....

Name..... .....Class.....

Time.....

EXERCISE 7

ADDITION

1. Begin at 4 and count by 7's to the first number greater than 100.
   Answer.....102
2. Begin at 5 and count by 11's to the first number greater than 150.
   Answer.....
3. Begin at 3 and count by 12's to the first number greater than 150.
   Answer.....
4. Begin at 2 and count by 13's to the first number greater than 140.
   Answer.....
5. Begin at 9 and count by 11's to the first number greater than 150.
   Answer.....
6. Begin at 4 and count by 14's to the first number greater than 160.
   Answer.....
7. Begin at 2 and count by 15's to the first number greater than 160.
   Answer.....
8. Begin at 3 and count by 16's to the first number greater than 150.
   Answer.....
9. Begin at 7 and count by 12's to the first number greater than 160.
   Answer.....
10. Begin at 2 and count by 11's to the first number greater than 150.
    Answer.....
11. Begin at 3 and count by 17's to the first number greater than 180.
    Answer.....
12. Begin at 1 and count by 18's to the first number greater than 190.
    Answer.....
13. Begin at 6 and count by 19's to the first number greater than 200.
    Answer.....

Date.....

Name..... Class.....

Time.....

EXERCISE 8

ADDITION

(1)

574	237	523	867	756
345	562	465	579	787
124	888	269	385	693

(2)

935	576	574	898	835
769	888	269	346	749
222	396	753	596	888

(3)

437	888	274	666	787
569	793	489	345	396
923	465	835	693	872

(4)

546	755	478	444	575
379	846	938	789	896
853	938	657	368	347

(5)

484	754	469	686	593
567	869	483	729	849
869	756	964	835	965
723	555	999	439	698

Grand Total

Date .....

Name..... ..... Class.....

Time..... .....

EXERCISE 9

ADDITION

(1)

746.18	436.29	937.48
357.24	728.46	273.75
563.72	375.84	528.69
934.85	296.45	375.84
168.93	493.63	642.37
5273.7	834.57	489.57

(2)

8456.38	4353.75	8479.32
3573.75	9469.37	3763.84
5495.49	5398.87	9827.55
9536.84	3877.25	4685.68
7738.56	6927.48	7993.97
4897.67	7973.69	2538.49
3949.53	4556.35	2974.82

(3)

6478.39	9937.48	4938.75
5436.45	7853.49	3756.45
7386.92	4978.39	6375.56
6938.67	5293.93	9789.37
5479.56	6749.55	4592.88
4392.78	8565.29	8367.72
7354.34	7348.85	5636.29
8743.85	2827.78	2954.27

Note—The best method of verifying addition is by repeating the work, adding each column in the *opposite direction* to what was done the first time. *Cover up your first answer.*

Date.....

Name.....Class.....

Time.....

EXERCISE 10

ADDITION

(1)

147.69	432.51	573.87	236.84	
235.42	675.18	647.82	583.56	
536.24	217.58	421.23	924.72	
483.56	386.29	824.34	867.21	
529.37	832.96	358.45	719.38	
817.21	199.37	146.66	692.95	

(2)

463.95	187.23	356.87	468.36	
572.84	573.69	479.35	572.94	
498.32	489.92	625.47	625.47	
825.78	666.34	837.59	893.72	
698.53	482.85	748.88	749.68	
759.66	728.67	962.93	935.85	

(3)

475.83	291.48	135.28	637.92	
492.28	539.82	782.83	582.48	
936.75	755.58	458.95	349.36	
783.94	873.95	863.37	456.59	
548.37	988.77	487.46	732.67	
666.44	214.46	939.52	291.35	

(4)

193.28	467.89	237.46	437.82	
251.75	532.41	478.29	596.29	
386.92	763.53	693.92	423.39	
598.19	958.77	826.33	868.97	
829.83	649.34	638.55	789.43	
736.66	524.19	755.83	574.74	

Name ..... Date

Class

Time

EXERCISE 11

ADDITION

(1)

£1·56	£2·98	£2·37	£1·27	£1·79
2·73	·37	·58	·39	·25
·38	1·25	1·29	1·75	3·15
·69	·39	·52	·45	·75
3·23	1·26	2·35	2·58	1·63

(2)

£2·48	£1·69	£1·12	£3·57	£2·68
·75	·38	5·69	·23	·15
1·37	·25	·39	·19	1·28
·93	1·34	·16	1·67	1·35
·28	·67	2·28	1·13	·49
1·36	·58	3·14	4·79	1·67
·59	1·25	1·92	1·56	4·76
1·23	2·39	5·35	·36	·88

(3)

£1·75	£2·37	£2·73	£3·57	£4·22
·79	1·68	3·58	·93	·93
2·36	·35	·75	1·25	·47
5·43	2·95	5·98	4·56	2·75
·98	·83	3·25	5·75	7·13
8·73	1·53	7·56	2·25	15·85
15·69	32·48	·92	13·65	2·98
22·73	16·35	23·53	9·28	7·35
19·65	9·72	9·72	13·74	15·63
8·32	8·30	2·25	17·13	9·27
15·37	31·57	4·55	32·67	18·36
27·62	8·33	27·38	3·25	2·78
19·29	5·67	5·37	5·61	9·32

Total .....

Date.....

Name..... Class.....

Time.....

EXERCISE 12

ADDITION

A.

1

234.56	434.67	627.19	375.48
529.35	693.58	373.42	523.75
736.48	527.42	574.73	742.92
543.72	378.29	732.25	687.23
694.67	147.19	8213.1	799.64
885.24	231.52	148.94	538.87

4693.85	63574.38	49837.92
7253.638	72465.82	23146.19
5758.42	6938.29	8367.46
47132.74	43887.65	47241.32
4833.45	1483.35	749.83
6934.29	7563.94	9864.55
48.97	432.46	83527.68
375.82	83259.47	37694.43
8495.23	4935.78	5234.82
9.75	237.69	693.95
524.68	8462.23	32469.28
3789.46	93271.68	7338.47

2 Add vertically and horizontally and prove:

32	65	48	93	78	59 =	
75	37	69	83	49	42 =	
84	63	37	75	57	93 =	
69	78	58	84	38	98 =	
82	65	94	72	45	53 =	
58	47	83	39	62	69 =	
64	38	83	78	93	47 =	

Date.....

Name..... Class.....

Time.....

EXERCISE 13

DOUBLE COLUMN ADDITION

After adding these columns, find the total of all the sums in each horizontal row.

(1)

37	29	38	42	68	31	
63	34	68	57	18	57	
49	52	72	68	23	65	
17	78	46	92	47	81	
34	83	62	83	62	97	
25	92	35	37	75	23	
46	27	72	21	23	75	
78	45	88	46	35	38	
59	73	79	67	78	77	

(2)

59	64	94	44	36	98	
27	75	47	59	27	37	
73	48	23	63	54	46	
48	32	42	74	32	75	
93	57	79	98	78	83	
52	42	92	32	63	75	
77	39	65	74	79	29	
29	28	57	95	82	32	
48	41	17	21	47	18	

(3)

33	75	61	79	59	74	
69	24	92	21	14	23	
37	37	53	48	56	46	
46	56	65	24	28	66	
75	47	43	78	78	48	
86	82	31	34	54	17	
28	69	57	85	30	36	
53	74	33	33	85	52	

Date .....

Name.....Class.....

EXERCISE 14

Time.....

TWO-COLUMN ADDITION

The ability to add two columns at a time with accuracy and speed, is very important to the bookkeeper.

15
13
21
36
42
67

The example at the left illustrates the method. Beginning at the bottom, add to the 67 the 2 just above it, then the 40, and so on:—thus, 67, 69, 109, 115, 145, 146, 166, 169, 179, 184, 194. Or the tens figure may in each case be added first;—thus, 67, 107, 109, 139, 145, 165, 166, 176, 179, 189, 194. After a little practice the student will be able to group two or three figures at once.

15	21	19	26	15	23	17
23	16	24	31	19	15	29
36	23	35	18	26	18	35
17	32	12	16	17	27	23
19	17	19	26	14	16	14
25	14	27	31	28	19	21

15	25	16	27	17	23	19
23	15	19	18	27	27	17
38	29	28	38	19	16	23
26	37	34	16	35	26	28
18	18	17	15	24	18	16
27	16	28	29	16	15	12
19	29	13	23	19	37	24

19	27	63	46	53	42	91
28	19	27	23	29	36	37
34	27	92	52	34	24	46
55	32	21	67	46	83	27
75	45	15	44	23	69	32
36	48	27	25	79	42	56
94	23	43	46	38	57	42
32	65	92	92	55	19	88
27	34	53	37	46	39	65

Date.....

Name.....Class.....

EXERCISE 15 Time..... ....

HORIZONTAL AND VERTICAL ADDITION

Add vertically and horizontally and prove:

(a)

15	14	18	20	24	15=	
16	15	18	11	19	23=	
22	19	15	13	17	19=	
19	17	14	15	16	18=	
23	18	17	19	15	23=	
18	21	19	14	13	14=	

(b)

15	27	38	62	25	42=	
29	35	68	29	15	17=	
22	43	21	18	62	14=	
18	22	42	23	31	23=	
31	18	15	37	18	37=	
17	28	24	32	27	42=	

(c)

27	69	35	78	42	83=	
84	57	63	75	87	36=	
47	92	89	59	45	75=	
38	32	47	32	66	49=	
65	48	76	64	59	57=	
79	83	92	83	38	68=	

(d)

57	75	43	25	75	92=	
75	98	22	58	48	57=	
82	37	89	69	97	48=	
47	28	75	23	32	26=	
59	47	93	88	43	34=	
43	93	37	47	88	42=	

Date.....

Name.....Class.....

Time.....

EXERCISE 16

HORIZONTAL AND DOUBLE-COLUMN ADDITION

Add horizontally each line; then total the results.

(1)	9	5	8	3	9	4	2	7	8	2	4	6 =
(2)	4	9	8	7	2	5	8	6	7	4	3	8 =
(3)	5	6	7	8	9	5	3	8	2	9	4	7 =
(4)	7	6	3	8	2	5	7	9	8	4	8	6 =
(5)	6	9	8	7	4	8	8	9	7	4	5	8 =
(6)	8	3	9	5	5	9	6	4	3	6	6	4 =
(7)	4	9	13	9	6	14	12	15	9	5	9	3 =
(8)	3	8	7	14	13	6	9	17	6	8	3	9 =
(9)	23	7	4	9	8	7	19	5	18	7	14	5 =
(10)	11	15	14	7	16	3	11	7	13	9	15	12 =
(11)	9	15	9	3	8	6	17	9	6	13	14	7 =
(12)	7	8	3	9	5	9	15	12	14	6	9	13 =
(13)	11	3	16	7	14	15	11	13	9	12	15	9 =
(14)	12	15	9	6	3	12	17	3	8	13	14	7 =
(15)	16	8	6	15	14	3	6	11	16	8	19	6 = _____
											Total =	_____

57	23	32	15	16	53	14
13	17	16	19	28	27	19
26	30	27	32	35	35	28
25	16	19	62	42	16	32
19	19	21	29	17	29	17
26	24	17	35	13	34	28
37	32	15	42	28	26	34
28	19	31	21	35	13	52
42	18	13	32	17	19	17
17	25	28	16	62	24	25
		Double-Column Total				

Date .....

Name..... .....Class..... .....

Time .....

EXERCISE 17

DOUBLE-COLUMN ADDITION with Money Numbers.

In this exercise at least the cents column should be added by the double-column method.

$0.29	$0.56	$0.87	$3.48	$1 55
.73	.25	.35	.55	.37
.25	.35	.49	.75	.85
1.15	3.47	2.98	2.13	2.15
.85	.95	.65	1.65	.48

Total (1) _____

(2)

$2.25	$0.83	$2.55	$2.13	$1.46
.85	.27	.69	.46	2.75
.92	.59	.23	.75	3.15
1.15	.72	.48	1.28	.78
1.49	2.39	1.29	1.65	1.35

Total (2) _____

(3)

$3.17	$1.29	$2.35	$1.35	$3 52
89	.34	.79	.65	.75
.65	2.13	.24	2.33	.27
.34	1.48	1.78	.75	1.43
1.25	.77	.39	1.69	1.65

Total (3) _____

(4)

$4.38	$3.55	$4.89	$3.45	$1.98
.59	.62	.78	1.62	3.87
2.63	.75	.32	.89	.93
.75	4.20	1.58	2.57	.75
3.18	.85	2.32	1.48	1.15

Total (4) _____

Date.....

Name..... Class.....

Time.....

EXERCISE 18

DOUBLE-COLUMN ADDITION with Money Numbers.

In this exercise at least the cents column should be added by the double-column method.

(1)

$0.25	$0.70	$0.65	$0.80	$0.45
.15	.65	.80	.55	.95
.25	.15	.95	.15	.30
.40	.35	.75	.25	.75
.75	.85	.45	.95	.65

Total (1) _____

(2)

$1.60	$1.75	$2.25	$0.35	$1.40
.35	.49	.45	.60	.35
2.50	.26	1.47	1.98	.68
.75	.45	.23	.37	.22
1.65	1.35	1.25	2.18	1.75

Total (2) _____

(3)

$2.49	$2.60	$2.45	$2.07	2.66
1.61	1.65	.97	3.18	1.31
.35	1.58	1.35	2.45	1.33
2.40	2.47	.78	1.26	.85
1.45	1.83	2.43	1.13	2.93

Total (3) _____

(4)

$1.47	$1.25	$1.85	$1.24	$1.14
2.48	1.65	2.75	2.36	2.23
2.35	2.47	2.14	.75	1.13
.75	1.83	3.36	2.29	1.75
1.65	2.75	2.15	1.36	3.16

Total (4) _____

Name..... Date.....

Class.....

Time.....

EXERCISE 19

S. S. Smith & Co.

Grocers

Sold to
Mrs R. U. Abel.
2324 Ontario St.

2512 Ontario St
Toronto, Ont.

Apr	6	7 lb Five Roses Flour .37	1 Yeast Cake .04				
		½ lb Orange Pekoe Tea .45	1 tin Tomatoes .12				
"	8	1 Pkg Dates .23	1 lb Mixed Biscuits .30				
"	9	2 lb Butter .92	2 doz Eggs .76				
		1 Pk Potatoes .17	1 doz Oranges .29				
"	13	½ lb Shelled Walnuts .20	2 pkg Dates .46				
		1 Tin Royal Baking Powder .22	1 Bot Mayonnaise .15				
"	15	2 Bread .20	1 Pkg Table Salt .13	1 Pkg Cheese .22			
		2 Tins Tomatoes .30	1 Pkg Corn Starch .13				
"	17	1 Pk Apples .65	½ doz Eggs .20	Celery .15			
		3 lb Crackers .23	1 lb Coffee .54	.55			
		6 Bars Sunlight Soap .32	3 Tins Corn .63				
"	18	1 Tin Gold Syrup .26	10 lb Sugar				
		3 lb Rolled Oats .12	2 lb Rice .18	¼ lb Pepper .19			
"	19	1 Pkg Cell Starch .15	2 Tins Salmon .54				
"	20	1 Bot Olives .35	1 Pkg Macaroni .15				
		½ lb Shelled Walnuts .20	½ lb Cheese .23				
"	23	1 Pkg Puffed Rice .18	1 Bot Stuffed Olives .19				
		2 Tins Tomatoes .30	1 Pkg Shredded Wheat .13				
"	27	Soap Flakes .13	1 Glass Peanut Butter .28				
		½ lb Cheese .24	3 Hand Soap .25				
"	29	3 Lemons .10	½ lb Cocoa .18				
		2 lb Coffee 1.08	8 Bars Surprise Soap .43				

Name..... Date.....

Class.....

Time.....

EXERCISE 20

BANK STATEMENT

Assets	31 Dec., 1928	30 Nov., 1928	31 Dec., 1927
Cash and Bank Balances.....	$ 515,804,260	$556,277,359	$ 485,917,734
Bank Balances Abroad.....	77,638,371	81,697,694	73,819,784
Call and Short Loans.....	558,493,061	526,531,585	532,548,871
Securities.....	524,560,843	488,291,948	529,444,178
Loans in Canada.....	1,334,220,257	1,361,129,075	1,170,000,631
Loans Abroad.....	262,497,930	239,325,845	264,708,072
Other Assets.....	196,485,876	197,932,593	175,218,930
Total Assets			
Liabilities			
Note Circulation.....	$186,086,685	$ 186,631,654	$ 182,747,049
Deposits—Government.....	135,461,228	127,395,362	94,976,822
" Public in Canada	2,235,308,452	2,249,718,789	2,128,959,946
" Foreign.....	382,577,35	383,331,615	374,425,788
Bank Balances—Canadian....	16,705,422	16,754,804	13,041,158
" " Foreign.....	118,274,526	91,611,101	74,139,315
Bills Payable	116,874,028	118,488,268	89,038,269
Capital and Rest.....	260,560,010	258,754,760	256,331,360
Other Liabilities.....	3,879,293	7,194,988	3,365,972
Total Liabilities			

Name.....Class.....Date.....

Time.....

EXERCISE 21

SALES SHEET for week ending June 29, 19.....

Clerk's Name	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Totals for Week	Rank
A. R. Buck..	$183 57	$139 78	$116 32	$201 36	$132 69	$75 38	.....	.....
N. F. Burt..	209 78	165 94	179 36	234 75	187 42	93 42	.....	.....
P. C. Massey	173 92	198 63	215 75	256 93	213 67	102 76	.....	.....
K. C. Ford..	165 75	205 48	226 39	237 86	195 58	98 69	.....	.....
J. M. Harris	228 67	213 85	198 67	249 35	186 63	89 54	.....	.....
S. F. Beatty	129 92	169 35	137 98	192 76	153 27	67 78	.....	.....
M. H. Page..	206 68	187 56	196 64	229 78	205 76	97 36	.....	.....
B. C. Hersey	215 37	209 39	203 56	247 83	208 97	105 67	.....	.....
Totals..	.....	.....	.....	.....	.....	.....	.....	.....

NOTE:—The sales manager of this company follows the method shown above, for discovering which of the salesmen are of most value to the company —and also those who are likely to be "released" by the company.

Date..... .....

Name..... Class.....

Time.....

EXERCISE 22

COUNTING FORWARD AND BACKWARD

1. Begin at 2 and count forward by 3's to the first sum above 58. Answer..... 59
2. Begin at 4 and count forward by 5's to the first sum above 93. Answer.....
3. Begin at 6 and count forward by 7's to the first sum above 95. Answer.....
4. Begin at 0 and count forward by $12\frac{1}{2}$'s to the first sum above 160. Answer.....
5. Begin at 0 and count forward by $16\frac{2}{3}$'s to the first sum above 137. Answer.....
6. Begin at 4 and count forward by $2\frac{1}{2}$'s to the first sum above 83. Answer.....
7. Begin at 5 and count forward by 15's to the first sum above 175. Answer.....
8. Begin at 8 and count forward by 11's to the first sum above 187. Answer.....
9. Begin at 3 and count forward by 13's to the first sum above 150. Answer.....
10. Begin at 8 and count forward by 14's to the first sum above 123. Answer.....
11. Begin at 115 and count backward by 6's. Answer.....
12. Begin at 103 and count backward by 9's. Answer.....
13. Begin at 158 and count backward by 12's. Answer.....
14. Begin at 152 and count backward by 11's. Answer.....
15. Begin at 150 and count backward by $12\frac{1}{2}$'s. Answer.....
16. Begin at 150 and count backward by $16\frac{2}{3}$'s. Answer.....
17. Begin at 127 and count backward by 7's. Answer.....
18. Begin at 147 and count backward by 13's. Answer.....
19. Begin at 156 and count backward by 8's. Answer.....
20. Begin at 100 and count backward by $8\frac{1}{3}$'s. Answer.....

Date..... .....

Name.....Class.....

Time.....

EXERCISE 23

Subtraction

54	32	58	62	71	30	52	63	49
17	19	27	29	46	18	37	27	23
78	37	62	46	28	43	67	90	41
39	18	33	37	9	27	39	27	34
33	52	71	42	63	57	42	50	42
27	45	36	27	28	29	19	36	17
61	92	67	47	84	57	31	48	52
28	43	51	23	45	28	17	23	18
38	45	63	53	69	58	73	53	23
25	29	37	19	32	49	18	25	9
82	68	45	72	57	30	46	57	19
47	23	19	36	29	16	18	39	8
54	27	37	43	36	51	60	72	45
24	8	28	19	18	37	29	37	29
91	83	72	46	58	41	39	78	46
47	29	38	19	23	15	18	39	18

Date.....

Name..... Class.....

Time..... .

EXERCISE 24

MAKING CHANGE

This is one of the most common every-day examples of subtraction, and it is plainly of vital importance that a clerk should be able to carry it on with accuracy and speed. Most clerks adopt the plan of adding to the amount of the purchase, enough coins and bills to make up the value of the sum which has been offered as payment. For example, if a man offers a $5.00 bill for payment of a purchase of $2.37, the clerk would say "$2.37, and 3 makes $2.40, and 10c. makes $2.50, and 50c. makes $3.00, and $2.00 makes $5.00.

	Value of Goods purchased	Payment Offered	Change							
			1¢	5¢	10¢	25¢	50¢	$1.00	$2.00	$5.00
1	$2.37	$5.00	3		1		1		1	
2	3.58	5.00								
3	5.68	10.00								
4	2.86	4.00								
5	4.28	5.00								
6	.80	2.00								
7	4.15	10.00								
8	1.37	10.00								
9	2.18	2.50								
10	.96	2.00								
11	3.28	10.00								
12	1.63	5.00								
13	8.15	10.00								
14	4.63	6.00								
15	6.95	10.00								
16	3.05	4.00								
17	.29	1.00								
18	2.98	10.00								

How could you verify your work? Do so.

Date.....

Name.....Class.....

Time.....

EXERCISE 25

Comparison of Part of Canadian Trade, 1926 and 1927.

Exports (in thousands of dollars)

	1927	1926	Increase	Decrease
Grains	469,784	497,033		
Milk, Butter and Cheese	41,616	55,208		
Fish	35,253	36,793		
Wood (unmanuf'd)	107,855	115,531		
Paper	123,223	110,105		
Implements	17,413	13,628		
Nickel	12,921	12,829		
Furs	20,609	17,472		
Vehicles	36,816	43,180		
Fibres, Textiles	7,666	8,940		
Asbestos	10,674	9,978		
Chemicals	16,575	17,498		
Totals				

Net Decrease..... Net Decrease.....

Imports (in thousands of dollars)

	1927	1926	Increase	Decrease
Fruits	30,297	27,313		
Grains	18,216	15,275		
Sugar	40,486	36,594		
Tea, Coffee &c	23,143	23,246		
Alcoh. Bever.	29,312	25,254		
Rubber	27,378	37,183		
Fibres, Textiles	183,584	184,762		
Vehicles	59,874	40,330		
Coal	68,637	63,654		
Petroleum	54,458	46,060		
Chemicals	31,845	28,404		
Machinery	60,028	45,369		
Totals				

Net Increase..... Net Increase.....

Date.....

Name..... Class .....

Time.....

EXERCISE 26

SUBTRACTION AND ADDITION—FINDING BALANCES.

When the total is known, the addition and subtraction to find a balance may best be done in one operation:— for example; adding downward 7, 11, 19, then a six would be required to make 25. In the next column (carrying 2), 2, 5, 6, 11—and three to make 14. In the dollars column (carrying 1), 1, 3, 8, 10—and four to make 14. Thus the balance is $4.36.

$2.37	
5.14	
2.58	
_____	
$14.45	

1.	2.	3.	4.
$34.27	$14.98	$29.37	$46.85
69.50	23.75	46.58	32.59
27.43	46.15	72.13	46.46
13.75	37.49	42.75	28.89
Bal.			
213.82	190.20	210.59	200.00

5.	6.	7.	8.
$73.45	$16.38	$78.99	$19.47
27.86	27.43	36.86	53.25
45.45	86.59	59.34	62.70
69.37	41.27	27.78	45.15
Bal.			
255.00	205.55	250.60	275.15

9.

Receipts	Payments
$2356 50	$2164 56
4173 98	967 84
5238 67	4251 17
4375 26	369 85
756 50	24 78
3729 98	3623 47
78 25	2934 69
4238 17	457 75
984 36	4528 36
437 55	1897 39
2519 97	

10.

Receipts	Payments
$3248 25	$1496 83
679 48	275 36
1623 73	1945 72
2984 67	3152 65
893 58	783 57
37 95	85 68
2386 57	1423 49
1427 46	1987 25
2935 48	1138 19
1642 25	2374 98
738 48	

Date.....

Name..... Class.....

Time .....

EXERCISE 27

Determine what change should be given to a customer in each of the following sales. (Check your result.)

Sale	Pay't.	Change								Total Chge.	Check
		Cents	5¢	10¢	25¢	50¢	Dollars	2 Dollars	5 Dollars		
3.11	5.00	4	.....	1	1	1	1	.....	.....	1.89	5.00
2.35	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1.65	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.23	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.22	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5.67	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.65	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.15	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.03	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.23	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1.08	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.37	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.93	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.87	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.87	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.27	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.58	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1.17	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.69	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8.83	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7.89	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5.67	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.56	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5.34	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1.15	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7.21	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.73	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.13	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5.27	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6.78	10.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11.23	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12.13	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Date.....

Name..... Class.....

Time.....

EXERCISE 28

A Add horizontally and vertically:

	(a)	(b)	(c)	(d)	(e)	(f)		
1	79	32	98	72	68	29	=	
2	26	97	57	75	95	25	=	
3	27	77	82	48	64	86	=	
4	82	64	32	63	29	82	=	
5	59	89	58	93	52	78	=	
6	84	55	53	54	73	35	=	
7	34	86	46	43	24	87	=	
8	44	57	52	67	29	72	=	
Totals							=	

B. Subtract:

1	2	3	4	5
23,056	10,987	12,304	16,251	11,417
19,372	8,698	9,547	15,490	10,753

6	7	8	9	10
34,556	41,327	41,417	12,121	61,543
23,518	18,372	40,739	9,376	16,277

C. Add and supply balances at foot of payment columns:

Receipts	Payments
4,968.75	2,764.55
277.63	792.84
98.25	1,016.50
864.62	87.27
79.78	260.25
850.60	1,407.92
16.87	184.73
1,472.25	16.65
627.27	264.70
98.65	93.58
416.67	

Receipts	Payments
2,175.37	235.80
386.56	1,165.42
1,097.26	279.98
206.37	67.35
57.89	295.87
1,147.25	450.63
987.35	25.91
37.87	1,463.20
365.92	68.58
207.68	92.67
1,467.67	

Name..... Date.....

Class.....

Time.....

EXERCISE 29

Gross Profits by Departments

Dept	Goods on hand Jan 1/28		Purchases 1928		Goods on hand Jan 1/29		Cost of goods sold in 1928		Sales in 1928		Profit		Loss	
A	5796	80	11574	63	4738	70			15187	60				
B	1593	50	7837	65	1876	75			7516	20				
C	4374	20	15729	60	3758	55			18178	10				
D	5975	27	18743	65	6127	50			21765	15				
E	938	73	9375	50	1235	20			9127	20				
F	2497	65	13738	10	2563	15			13785	80				
G	5910	80	22875	60	4110	90			31527	80				
Totals														

Net Profit..... Net Loss.....

How could you prove your work? Do so.

EXERCISE 30

MULTIPLICATION

19	17	18	13	14	16	19	15	14
5	4	6	7	5	6	3	7	3
23	32	21	25	26	28	27	29	31
2	3	4	3	2	4	3	2	4
24	26	21	28	43	35	37	16	17
3	4	6	2	3	4	3	7	6
19	17	15	18	23	26	36	14	15
4	3	5	4	4	3	2	6	3
12	13	23	16	18	12	24	27	35
9	5	6	4	5	8	5	4	3
39	45	19	17	16	15	19	18	16
2	3	6	2	5	4	7	2	3
19	18	15	14	24	14	28	17	16
8	7	9	4	6	8	3	8	9
17	18	16	14	23	27	24	19	18
7	9	8	9	3	5	4	9	8

Date.....

Name..... Class.....

Time.....

EXERCISE 31

Multiply and Add:

	A	B	C
(1)	36×7 =	43×8 =	79×9 =
(2)	23×5 =	52×6 =	97×8 =
(3)	47×3 =	65×7 =	73×7 =
(4)	28×6 =	44×4 =	77×6 =
(5)	49×4 =	52×6 =	69×7 =
(6)	37×5 =	62×4 =	97×6 =
(7)	42×8 =	57×5 =	88×5 =
(8)	58×3 =	73×4 =	84×7 =
(9)	27×7 =	47×3 =	93×6 =
(10)	36×4 =	39×4 =	99×8 =
(11)	43×5 =	55×5 =	87×6 =
(12)	27×4 =	64×3 =	69×5 =
(13)	19×9 =	59×5 =	95×9 =
(14)	92×3 =	62×7 =	86×5 =
(15)	43×6 =	48×5 =	78×8 =
(16)	35×4 =	46×6 =	86×9 =
(17)	29×5 =	67×4 =	68×7 =
(18)	43×6 =	43×7 =	74×6 =
(19)	26×4 =	34×6 =	49×9 =
(20)	54×2 =	53×4 =	94×7 =
(21)	33×4 =	49×6 =	87×8 =
(22)	28×6 =	41×5 =	68×9 =
(23)	32×5 =	64×6 =	76×7 =
(24)	29×3 =	46×3 =	96×8 =
(25)	23×6 =	59×4 =	69×9 =
	Total		

Date.....

Name..... Class.....

Time.....

EXERCISE 32

MULTIPLICATION

The following examples should all be worked mentally:

A

1. 4234×12 =
2. 3256×11 =
3. 1724×25 =
4. 2358×20 =
5. 6793×50 =
6. 2342×13 =
7. 2756×12 =
8. 6357×11 =
9. 4253×13 =
10. 2876×12 = _____

Total _____

B

1. 2758×25 =
2. 4963×20 =
3. 758×250 =
4. 2359×30 =
5. 7586×12 =
6. 3287×11 =
7. 5243×13 =
8. 6493×12 =
9. 9865×11 =
10. 4352×13 = _____

Total _____

C

1. 3245×14 =
2. 5232×16 =
3. 6354×15 =
4. 4325×17 =
5. 5264×13 =
6. 4235×16 =
7. 3542×15 =
8. 4567×14 =
9. 6234×17 =
10. 4253×13 = _____

Total _____

D

1. 2345×17 =
2. 3254×18 =
3. 5243×19 =
4. 6352×15 =
5. 4253×18 =
6. 2453×19 =
7. 6345×17 =
8. 5234×16 =
9. 9876×13 =
10. 4265×16 = _____

Total _____

Date.....

Name.....Class.....

Time.....

EXERCISE 33

CROSS MULTIPLICATION

This is a very convenient way of multiplying two numbers of two figures each, and is of special value in extending totals in bills and invoices.

27
32
—
864

Example:—Units figure $2 \times 7 = 14$.—Put down 4 and carry 1. Tens figure of answer $2 \times 2 + 3 \times 7 + 1 = 26$. Put down 6 and carry 2. Hundreds figure $3 \times 2 + 2 = 8$.

Practise first on section A in this manner; then try the other sections mentally (without writing the one number under the other).

A.

23	34	54	52	48	53	29
45	27	32	23	35	42	36

B.

1. 23 × 32 =
2. 34 × 21 =
3. 42 × 23 =
4. 22 × 31 =
5. 36 × 24 =
6. 27 × 23 =
7. 35 × 35 =
8. 24 × 42 =
9. 33 × 22 =
10. 23 × 23 =
11. 37 × 27 =
12. 35 × 32 =
13. 36 × 33 =
14. 38 × 27 =
15. 33 × 26 =

Total _____

C.

1. 57 × 27 =
2. 45 × 36 =
3. 57 × 24 =
4. 46 × 37 =
5. 64 × 73 =
6. 74 × 32 =
7. 44 × 43 =
8. 53 × 36 =
9. 63 × 26 =
10. 55 × 34 =
11. 76 × 67 =
12. 57 × 64 =
13. 49 × 38 =
14. 58 × 47 =
15. 93 × 36 =

Total _____

Date.....

Name.....Class .....

Time.....

EXERCISE 34

CROSS-MULTIPLICATION IN INVOICING

Complete the following invoice without the use of any rough work.

Kingston, Ont., Aug. 15, 1929.

Rookcliffe Hospital,
Bought of
THE PAUL JONES CO., LTD.

July	16	57 lbs. Cheese	@ $.32				
		68 doz. Eggs	@ .35				
		23 lbs. Tea	@ .65				
	20	37 lbs. Butter	@ .43				
		35 lbs. Raisins	@ .23				
		6 doz. Tomatoes	@ 2.75				
		4 doz. Corn	@ 2.95				
	23	19 lbs. Chocolate	@ .37				
		78 lbs. Coffee	@ .63				
		17 bu. Potatoes	@ .95				
		35 pkgs. Cereal	@ .29				
	25	48 doz. Eggs	@ .34				
		27 pkgs. Flour	@ .58				
		28 cans Rasp. Jam	@ .38				
		62 lbs. Butter	@ .46				
	29	79 lbs. Biscuits	@ .27				
		45 lbs. Cocoa	@ .48				
		28 gals. Corn Syrup	@ .93				
		36 gals. Molasses	@ .62				
	31	37 lbs. Tea	@ .68				
		46 lbs. Ham	@ .57				

Date . . .

Name . . . . . Class . . . . . .

Time . . . . . .

EXERCISE 35

TESTING MULTIPLICATION BY CASTING OUT NINES

This depends on the fact that when any number is divided by nine, the remainder is the same as when the sum of its digits is divided by 9.

Example:—Multiply 574 by 257.

574—Sum of digits = 16—Cast out nine; remainder = 7
257—Sum of digits = 14—Cast out nine; remainder = 5

4018 — 7x5 = 35
2870 — Cast the nines out of 35
1148 — and remainder = 8*
147518—Sum of digits = 26.

Cast the nines out of 26 and remainder = 8*.

* These two figures should agree.

Note:—The fact that these two figures do agree is not a *definite proof* of accuracy.

What errors might there be, which would not be detected by this test?

Multiply and test, giving both product and test figure for each question below:

		Product	(Test Figure)
(1)	2345 × 345 =	. . . . .	( )
(2)	1385 × 263 =	. . . . .	( )
(3)	2734 × 728 =	. . . . .	( )
(4)	3264 × 358 =	. . . . .	( )
(5)	5342 × 437 =	. . . . .	( )
(6)	6284 × 486 =	. . . . .	( )
(7)	8937 × 583 =	. . . . .	( )
(8)	6389 × 876 =	. . . . .	( )
(9)	5364 × 456 =	. . . . .	( )
(10)	4567 × 345 =	. . . . .	( )
(11)	6934 × 928 =	. . . . .	( )
(12)	4867 × 567 =	. . . . .	( )
	Total =		

Date.....

Name ..... Class.....

Time.....

EXERCISE 36

Multiplication by Numbers near 100 or 1000.

Example 1. Multiply 783 by 98.

Add two 0's (*i.e.*, multiply by 100) and subtract twice 783:— thus

$$\begin{array}{r} 78300 \\ 1566 \\ \hline 76734 \end{array}$$

Example 2. Multiply 4835 by 997.

Add three 0's (*i.e.*, multiply by 1000) and subtract three times 4835:—thus

$$\begin{array}{r} 4835000 \\ 14505 \\ \hline 4820495 \end{array}$$

Exercise—Test accuracy by casting out nines.

(1) 193 × 99 = ... ( )
(2) 278 × 97 = ... ( )
(3) 543 × 96 = ... ( )
(4) 342 × 98 = ... ( )
(5) 637 × 95 = ... ( )
(6) 478 × 94 = ... ( )
(7) 563 × 93 = ... ( )
(8) 256 × 96 = ... ( )
(9) 327 × 99 = ... ( )
(10) 562 × 97 = ... ( )
(11) 93 × 99 = ... ( )
(12) 87 × 98 = ... ( )
(13) 2356 × 998 = ... ( )
(14) 2734 × 999 = ... ( )
(15) 4263 × 997 = ... ( )
(16) 5327 × 995 = ... ( )
(17) 4638 × 996 = ... ( )
(18) 7638 × 993 = ... ( )
(19) 4257 × 990 = ... ( )
(20) 2783 × 102 = ... ( )
(21) 3269 × 994 = ... ( )
(22) 5783 × 998 = ... ( )
(23) 2937 × 999 = ... ( )
(24) 3768 × 997 = ... ( )

Date.....

Name.....Class.....

EXERCISE 37

Time.....

MULTIPLICATION—Using a reduced number of partial products.

Example:

```
        5437
          246
   a →  32622
   b → 130488
       1337502
```

Line *a* is six times the multiplicand. Line *b* is obtained by taking four times line *a*, and hence it is 24 times the multiplicand.

Note that line *a* started in the tens column. In some of the exercises below, it will be necessary to multiply first by the hundreds digit (starting the product in the hundreds column)

In each of the following, use *only two* lines of partial product

5683 279	4695 357	4786 284
6358 735	4587 648	2387 427
4835 728	6287 436	5736 936

Date.....

Name.....Class.....

Time.....

EXERCISE 38

PAY ROLL

Date—Sept. 14, 1929.

No.	Name	No. of hours each day						Total Hours		Rate	Wages		
		M	T	W	T	F	S	Regular	*O'r time		Regular	Overtime	Total
1	L. K. Box	7½	8	8	8	9	5	44	1½	.70	$30.80	1.58	$ 32.38
2	M. J. Dodd	8	8	8	8	7	4			.65			
3	B. C. Gow	8½	7	6	9	7	5½			.75			
4	F. K. Hicks	9	8	8	7	8	6			.70			
5	J. R. King	10	8	7	7	8	7			.90			
6	W. R. Miles	9	7	6	6	7½	4			.95			
7	C. F. Price	8	8	7	5	9½	6½			1.10			
8	A. M. Smith	9	10	7	6	8	7½			1.10			
9	A. C. Timms	7	8½	6	8	7	5			.85			
10	R. A. Young	8	7	7½	7	9	4			.60			
	Totals												

*Note—This payroll is based on a 44-hour week. Allow time and a half for overtime work.

Bill and Specie Memorandum

	$10	$5	$2	$1	50c	25c	10c	5c	1c
1	3		1			1	1		3
2									
3									
4									
5									
6									
7									
8									
9									
10									
Totals									

Bank Withdrawal Slip.

The Scholastic Bank
Hamilton, Ont.
Sept. 14, 1929.
The W. R. Jones Co. Ltd.
require the following:

..... × $10	.....	.....
..... × $5	.....	.....
..... × $2	.....	.....
..... × $1	.....	.....
..... × 50¢	.....	.....
..... × 25¢	.....	.....
..... × 10¢	.....	.....
..... × 5¢	.....	.....
..... × 1¢	.....	.....
Total		

Date.....

Name.....Class.....

Time.....

EXERCISE 39

Our Order No. 2711
Your Order No. 235

A. W. BENNETT MACHINE CO.

Richmond St., Toronto.

Sold to
LOKOF DYE CO.,
Galt, Ont.

Oct. 27, 19..

	1 Automatic Measuring and Boxing Machine					
37	hrs. Designing.....@	$1.25	.....	....		
76	hrs. Drawing .....@	90	.....	....		
45	hrs. Pattern work....@	65	.....	....		
160	ft. Pattern Pine.....@	.25	.....	....		
287	hrs. Machine work....@	.95	.....	....		
26	hrs. Forging.....@	1.20	.....	....		
147	lbs. Chrome Steel....@	.16	.....	....		
220	lbs. Machine Steel...@	.12	.....	....		
1625	lbs. Castings.....@	.08	.....	....		
48	lbs. Wrought Iron....@	.06	.....	....		
	Special Bearings.....@	12.15	.....	....		
	Special tools.....@	115.00	.....	....		
	Blue Prints.....@	2.10	.....	....		
	Machine Screws.....@	1.85	.....	....		
	Overhead charges.....@	125.00	.....	....		

Date.....

Name..... Class.....

Time .....

EXERCISE 40

PIECE-RATE PAY ROLL.

Fill in the pay roll below:

Week Ending Feb. 16, 1929
THE F. C. JONES CO. LTD.
Department E.

No	Name	Operation No.	Pieces Produced						Total No.	Rate	Amount Earned	
			M.	T.	W.	T.	F.	S.				
1	S. A. Ash	A.24	63	67	62	65	59	31	.....	11¢	.....	....
2	J. T. Bell	A.33	48	45	49	50	47	24	.....	14¢	.....	....
3	D. C. Burk	B.16	38	41	43	42	39	21	.....	17¢	.....	....
4	A. Cowan..	C.9	57	59	58	57	52	24	.....	12¢	.....	....
5	P. Q. Farr	A.19	89	93	95	98	92	44	.....	7¢.	.....	....
6	L. K. Hand	B.11	41	39	42	43	39	19	.....	18¢	.....	....
7	J. Marks..	B.13	25	27	26	29	24	15	.....	23¢	.....	....
8	S. Platt..	C.7	52	53	55	49	48	26	.....	13¢	.....	....
9	C. M. Reed	C.15	72	75	79	77	71	38	.....	9¢	.....	....
10	S. Sweet..	A.21	61	58	64	66	62	29	.....	11¢	.....	....
	Totals		..	..	..	..	..	..	.....	....	.....	....

Multiply mentally:

(1) 53 × 17 =.....
(2) 27 × 23 =.....
(3) 46 × 32 =.....
(4) 63 × 26 =.....
(5) 59 × 32 =.....
(6) 82 × 41 =.....
(7) 93 × 23 =.....
(8) 73 × 47 =.....
(9) 26 × 35 =.....
(10) 49 × 19 =.....

Total _____

(1) 42 × 27 =.....
(2) 29 × 36 =.....
(3) 39 × 52 =.....
(4) 81 × 53 =.....
(5) 67 × 24 =.....
(6) 57 × 33 =.....
(7) 95 × 21 =.....
(8) 36 × 37 =.....
(9) 73 × 31 =.....
(10) 85 × 29 =.....

Total _____

Date .....

Name..... Class.....

Time.....

EXERCISE 41

The People's Gas Co. of Winnipeg, Manitoba, has a schedule of rates as follows:—

First 10,000 cu. ft. per month, 10¢ per 100 cu.ft.
Next 90,000 " " " 9½¢ " 100 "
Over 100,000 " " " 9¢ " 100 "

A discount of 1½¢ per 100 cu. ft. is allowed if the bill is paid before the end of the month.

Also a service charge of 50¢ per month is charged each customer.

Calculate the net amount of each of the following accounts.
NOTE:—Meter readings are given in hundreds of cu. ft.

Ac.	Present Meter Reading	Last Meter Reading	Consumption in hundreds of cu. ft.	Charge including Service	Charge	Net Charge
1	3018	2876	142	100 @ 10 = 10.00 42 @ 9½ = 3.99 .50	14.49	12.36
2	11359	11275				
3	3196	2594				
4	1559	1324				
5	948	785				
6	452	325				
7	1341	1115				

Name..... Class.....

Date..... .....

EXERCISE 42
SHORT DIVISION

Time ....

1	4	3985	5	1935	6	2932
2	7	2324	8	5424	9	3537
3	6	9252	11	5954	12	7068
4	8	3008	9	6246	7	5523
5	6	4392	12	9708	11	6347
6	5	8365	8	5928	7	8526
7	4	1988	3	2229	8	5296
8	9	7353	12	8124	11	2695
9	8	7352	11	5698	12	5736

Totals

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total of Results .....

Date.....

Name..... Class.....

Time.....

EXERCISE 43

SHORT DIVISION.

(1) $5\overline{)6175}$ $4\overline{)7868}$ $8\overline{)9216}$ Totals .....

(2) $7\overline{)53833}$ $6\overline{)9102}$ $9\overline{)43833}$ .....

(3) $3\overline{)6927}$ $8\overline{)4168}$ $7\overline{)3612}$ .....

(4) $8\overline{)2936}$ $11\overline{)8327}$ $12\overline{)9168}$ .....

(5) $7\overline{)5985}$ $12\overline{)6276}$ $11\overline{)5918}$ .....

(6) $9\overline{)3861}$ $11\overline{)4191}$ $13\overline{)6383}$ .....

(7) $6\overline{)58744}$ $13\overline{)73844}$ $12\overline{)7932}$ .....

(8) $7\overline{)61744}$ $14\overline{)29544}$ $15\overline{)7965}$ .....

(9) $8\overline{)4656}$ $16\overline{)8256}$ $17\overline{)9911}$ .....

Total of Results .....

Date..... .....

Name..... .... Class..... .....

Time.....

EXERCISE 44

LONG DIVISION

(1) $823\overline{)4515801}$

(2) $639\overline{)37106073}$

(3) $426\overline{)10935735}$

(4) $728\overline{)65567531}$

(5) $389\overline{)17582580}$

(6) $294\overline{)20458625}$

Date.....

Name..... Class.....

Time.....

EXERCISE 45

A. Express:

1. 5 miles in feet = ...
2. 2 acres in sq. yds. = ...
3. 2 bushels in quarts = ...
4. 3 weeks in hours = ...
5. 5 gross in units = ...
6. 3 hours, 15 min. in seconds = ...
7. $3\frac{1}{2}$ gallons in pints = ...
8. 120 rods, 3 yds. in feet = ...
9. 1 long ton in ounces = ...
10. 2 gross, 3 doz. in units = ...
11. 9826 inches in rods = ...
12. 1224 pints in bushels = ...
13. 3625 seconds in hours = ...
14. 2580 feet in miles = ...

B. Find the cost of 7 loads of coal, as follows, at $14.90 per ton.

10,825 lbs.	9,870 lbs.	9,950 lbs.
9,750 lbs.	10,230 lbs.	
10,500 lbs.	9,300 lbs.	

..... tons @ $14.90

= .....

Name ..... Date.....

Class.....

Time .....

EXERCISE 46

Exports from Canada to certain other Countries.

	Argentina	Australia
1921	$8,171,980	$18,112,861
1922	3,233,423	10,678,600
1923	4,445,041	18,783,766
1924	7,305,866	19,923,997
1925	10,322,373	12,035,086
1926	12,639,706	15,411,746
1927	13,101,846	18,965,881
Total		
Av. 7 yrs		

	France	Germany
1921	$27,428,308	$ 8,215,337
1922	8,208,228	4,509,547
1923	14,118,577	9,950,877
1924	18,879,097	16,153,650
1925	10,290,063	24,234,685
1926	13,952,262	30,734,037
1927	15,220,232	34,411,021
Total		
Av. 7 yrs		

	Great Britain	United States
1921	312,844,871	542,322,967
1922	299,361,675	292,588,643
1923	379,067,445	369,080,218
1924	360,057,782	430,707,544
1925	395,843,433	417,417,144
1926	508,237,560	474,987,367
1927	446,872,851	466,422,789
Total		
Av. 7 yrs		

Date.....

Name ..... Class .....

EXERCISE 47 Time.....

Bank Clearings of some Canadian cities for the month of December, 1927.

City	Bank Clearings		
Brandon, Man.	$ 3,355,489		
Brantford, Ont.	6,813,418		
Calgary, Alta.	54,297,090		
Chatham, Ont.	3,865,384		
Edmonton, Alta.	31,466,687		
Fort William, Ont.	5,374,419		
Halifax, N.S.	16,580,204		
Hamilton, Ont.	27,477,418		
Kingston, Ont.	3,924,845		
Kitchener, Ont.	6,108,781		
Lethbridge, Alta.	3,519,988		
London, Ont.	16,181,139		
Medicine Hat, Alta.	2,375,342		
Moncton, N.B.	4,622,244		
Montreal, Que.	825,619,853		
Moose Jaw, Sask.	7,708,331		
New Westminster, B.C.	3,845,574		
Ottawa, Ont.	42,366,842		
Peterborough, Ont.	4,634,618		
Prince Albert, Sask.	2,280,861		
Quebec, Que.	37,770,167		
Regina, Sask.	37,589,998		
St. John, N.B.	13,849,649		
Sarnia, Ont.	3,017,177		
Saskatoon, Sask.	12,952,884		
Sherbrooke, Que.	4,054,435		
Toronto, Ont.	724,571,092		
Vancouver, B.C.	89,948,970		
Victoria, B.C.	10,964,868		
Windsor, Ont.	23,696,573		
Winnipeg, Man.	350,829,092		
Total Clearings			

Average Clearings per city.....

1. In the first blank column, place a check mark opposite each city whose clearings are larger than the average.
2. In the second blank column, rank these cities from No. 1 to No. 31 according to bank clearings.

Name. . . .

Date. . . . . .

Class ....

Time..... ...

EXERCISE 48

ORDER NO. 112
INVOICE NO. 6275
VIA
TERMS 30 Days SUBJECT TO DRAFT
DATE May 10, 19

Brown Brothers Limited
Mytown, Canada

YOUR ORDER NO. 216

SOLD TO Mr. D. Scott-Ferguson,
ADDRESS Timmins, Ont.

PURCHASER'S RECORD

PUR. ORDER	
PRICES	
CALCULAT'NS	
DATE REC'D	
REC'D BY	
FREIGHT O. K.	
PUR. J. PAGE	
COSTED	
PERP. INVT.	

APPROVED | ACCOUNT

British Columbia Pine

10	pcs.	2 x 10 - 20 ft.	$62.00 per M.
24	"	2 x 10 - 18 ft.	" " "
16	"	2 x 10 - 16 ft.	" " "
13	"	2 x 8 - 14 ft.	" " "
14	"	2 x 8 - 16 ft.	" " "
5	"	6 x 6 - 14 ft.	" " "
8	"	6 x 6 - 18 ft.	" " "
2	"	4 x 6 - 12 ft.	" " "
8	"	4 x 6 - 18 ft.	" " "
14	"	2 x 6 - 16 ft.	" " "
6	"	2 x 6 - 18 ft.	" " "
6	"	2 x 4 - 14 ft.	" " "
18	"	2 x 4 - 16 ft.	" " "
10	"	3 x 4 - 14 ft.	" " "
13	"	3 x 4 - 16 ft.	" " "
3	"	3 x 4 - 20 ft.	" " "
6	"	2 x 6 - 12 ft.	" " "
16	"	2 x 6 - 18 ft.	" " "

Date.....

Name.....Class.....

Time.....

EXERCISE 49

W. J. GRAY LIMITED
48 COLLEGE ST. WEST
YOUR ADDRESS

DATE May 25, 19 .
SOLD TO Mr. D. A. Crozier,
ADDRESS Belleville, Ont.

OUR NO. 7219
VIA Freight
TERMS 30 Days.

20	pcs. Broadcloth 63^2, 62^2, 58^1, 61, 67^1, 68, 67^2, 65^3, 64, 68^1, 72, 71^2, 70^3, 75, 76^1, 69^3, 67, 72^2, 68, 65^3. ..... yds. @ .55½			
16	pcs. Cashmere 57^2, 58^3, 54, 56^3, 57^1, 53, 58^2, 57^3, 62^1, 55, 59^2, 60^3, 54, 58^2, 56, 59^1. ..... yds. @ .26½			
10	pcs. Serge 66^2, 67^2, 65, 69, 68^3, 72^1, 70^2, 68, 69^3, 65^1. ..... yds. @ $2.38			

ORAL EXERCISE 50

This page to be retained in the pad, and its contents *memorized* and *drilled upon.*

TESTS FOR DIVISIBILITY.

(1) A number is divisible by 2, if its units digit is divisible by 2.
(2) A number is divisible by 3, if the sum of its digits is divisible by 3.
(3) A number is divisible by 4, if its last two digits are divisible by 4.
(4) A number is divisible by 5, if its units digit is divisible by 5.
(5) A number is divisible by 6, if it is divisible by 2 and by 3.
(6) There is no easy test for divisibility by 7.
(7) A number is divisible by 8, if its last three digits are divisible by 8
(8) A number is divisible by 9, if the sum of its digits is divisible by 9.
(9) A number is divisible by 10, if its units digit is 0.
(10) A number is divisible by 11, if the sum of its odd digits (first, third, fifth, etc.) is either equal to the sum of the even digits or differs from it by 11.
(11) A number is divisible by 12 if it is divisible by 3 and by 4

ALIQUOT PARTS of 10, 100, and 1000.

$\frac{1}{2}$ of 10 = 5	$\frac{1}{2}$ of 100 = 50	$\frac{1}{2}$ of 1000 = 500
$\frac{1}{3}$ of 10 = $3\frac{1}{3}$	$\frac{1}{3}$ of 100 = $33\frac{1}{3}$	$\frac{1}{3}$ of 1000 = $333\frac{1}{3}$
$\frac{2}{3}$ of 10 = $6\frac{2}{3}$	$\frac{2}{3}$ of 100 = $66\frac{2}{3}$	$\frac{2}{3}$ of 1000 = $666\frac{2}{3}$
$\frac{1}{4}$ of 10 = $2\frac{1}{2}$	$\frac{1}{4}$ of 100 = 25	$\frac{1}{4}$ of 1000 = 250
$\frac{3}{4}$ of 10 = $7\frac{1}{2}$	$\frac{3}{4}$ of 100 = 75	$\frac{3}{4}$ of 1000 = 750
$\frac{1}{5}$ of 10 = 2	$\frac{1}{5}$ of 100 = 20	$\frac{1}{5}$ of 1000 = 200
$\frac{2}{5}$ of 10 = 4	$\frac{2}{5}$ of 100 = 40	$\frac{2}{5}$ of 1000 = 400
$\frac{3}{5}$ of 10 = 6	$\frac{3}{5}$ of 100 = 60	$\frac{3}{5}$ of 1000 = 600
$\frac{4}{5}$ of 10 = 8	$\frac{4}{5}$ of 100 = 80	$\frac{4}{5}$ of 1000 = 800
$\frac{1}{6}$ of 10 = $1\frac{2}{3}$	$\frac{1}{6}$ of 100 = $16\frac{2}{3}$	$\frac{1}{6}$ of 1000 = $166\frac{2}{3}$
$\frac{5}{6}$ of 10 = $8\frac{1}{3}$	$\frac{5}{6}$ of 100 = $83\frac{1}{3}$	$\frac{5}{6}$ of 1000 = $833\frac{1}{3}$
$\frac{1}{7}$ of 10 = $1\frac{3}{7}$	$\frac{1}{7}$ of 100 = $14\frac{2}{7}$	$\frac{1}{7}$ of 1000 = $142\frac{6}{7}$
$\frac{1}{8}$ of 10 = $1\frac{1}{4}$	$\frac{1}{8}$ of 100 = $12\frac{1}{2}$	$\frac{1}{8}$ of 1000 = 125
$\frac{3}{8}$ of 10 = $3\frac{3}{4}$	$\frac{3}{8}$ of 100 = $37\frac{1}{2}$	$\frac{3}{8}$ of 1000 = 375
$\frac{5}{8}$ of 10 = $6\frac{1}{4}$	$\frac{5}{8}$ of 100 = $62\frac{1}{2}$	$\frac{5}{8}$ of 1000 = 625
$\frac{7}{8}$ of 10 = $8\frac{3}{4}$	$\frac{7}{8}$ of 100 = $87\frac{1}{2}$	$\frac{7}{8}$ of 1000 = 875
$\frac{1}{9}$ of 10 = $1\frac{1}{9}$	$\frac{1}{9}$ of 100 = $11\frac{1}{9}$	$\frac{1}{9}$ of 1000 = $111\frac{1}{9}$
$\frac{1}{10}$ of 10 = 1	$\frac{1}{10}$ of 100 = 10	$\frac{1}{10}$ of 1000 = 100

Date.....

Name..... Class.....

Time.....

EXERCISE 51

TESTS FOR DIVISIBILITY

1. Underline the numbers exactly divisible by 2:--
5783; 294; 66835; 9734; 568; 47392.

2. Underline the numbers exactly divisible by 3:--
5983; 2469; 57942; 985; 4678; 511632;
712; 786; 252; 384; 5927.

3. Underline the numbers exactly divisible by 4:--
4282; 6936; 71656; 528694; 7246.

4. Underline the numbers exactly divisible by 9:--
315873; 3586935; 42826; 5291;
837; 2961; 76845; 234567.

5. Underline the numbers exactly divisible by 11:--
526937; 616; 6938; 759; 5382; 429;
53864294; 25652; 735628355.

6. Reduce to lowest terms:

$\frac{105}{462}$=..... $\frac{840}{1575}$=..... $\frac{2772}{3630}$=.....

$\frac{363}{1155}$=..... $\frac{780}{1530}$=..... $\frac{3696}{23100}$=.....

$\frac{308}{693}$=..... $\frac{690}{1265}$=..... $\frac{504}{616}$=.....

Date.....

Name..... .....Class.....

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EXERCISE 52

TESTS FOR DIVISIBILITY

1. After each of the following numbers, write all the numbers from 2 to 12, which would divide exactly into it.

Number	Divisors	Number	Divisors
1. 57832	.....	1. 42342	.....
2. 29376	.....	2. 29814	.....
3. 43650	.....	3. 35471	.....
4. 29358	.....	4. 77772	.....
5. 48297	.....	5. 14641	.....
6. 72108	.....	6. 23575	.....
7. 36982	.....	7. 10908	.....
8. 12345	.....	8. 29293	.....
9. 23562	.....	9. 44730	.....
10. 44044	.....	10. 73361	.....
11. 25600	.....	11. 59496	.....
12. 92651	.....	12. 75360	.....

2. Reduce to lowest terms:

$\frac{36}{75}=$..... $\frac{51}{136}=$..... $\frac{120}{168}=$.....

$\frac{56}{91}=$..... $\frac{95}{133}=$..... $\frac{147}{189}=$.....

$\frac{48}{64}=$..... $\frac{162}{189}=$..... $\frac{138}{161}=$.....

$\frac{75}{120}=$..... $\frac{297}{1155}=$..... $\frac{186}{341}=$.....

$\frac{98}{126}=$..... $\frac{64}{368}=$..... $\frac{261}{319}=$.....

$\frac{81}{135}=$..... $\frac{165}{264}=$..... $\frac{259}{333}=$.....

Date . . . . . .

Name. . . . . Class. . . . . .

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EXERCISE 53

Find the least common multiple:

1. 6, 12, 4, 8, 10 . . . . . 5. 8, 18, 12, 30, 20 . . . . . .
2. 14, 21, 12, 28, 56 . . . . . 6. 6, 9, 15, 45, 30 . . . . . .
3. 35, 21, 12, 20, 60 . . . . . 7. 24, 36, 45, 60, 18 . . . . . .
4. 5, 15, 8, 20, 12 . . . . . 8. 20, 15, 21, 35, 84 . . . . . .

Find the sum:

1.	2.	3.	4.	5.	6.
$\frac{1}{4}$	$\frac{1}{3}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{2}{5}$	$\frac{1}{4}$
$\frac{2}{3}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{5}{8}$
$\frac{1}{6}$	$\frac{2}{5}$	$\frac{1}{6}$	$\frac{2}{3}$	$\frac{1}{3}$	$\frac{1}{2}$
$\frac{3}{4}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{4}$

7.	8.	9.	10.	11.	12.
$\frac{1}{6}$	$\frac{2}{5}$	$\frac{5}{8}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$
$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{16}$	$\frac{3}{8}$	$\frac{5}{6}$	$\frac{1}{5}$
$\frac{3}{4}$	$\frac{3}{10}$	$\frac{3}{4}$	$\frac{5}{12}$	$\frac{1}{2}$	$\frac{1}{3}$
$\frac{5}{6}$	$\frac{4}{5}$	$\frac{5}{16}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{5}{6}$
$\frac{1}{8}$	$\frac{3}{10}$	$\frac{3}{4}$	$\frac{1}{12}$	$\frac{1}{3}$	$\frac{1}{2}$
$\frac{1}{3}$	$\frac{2}{5}$	$\frac{1}{8}$	$\frac{5}{6}$	$\frac{2}{5}$	$\frac{3}{5}$
$\frac{1}{2}$	$\frac{1}{10}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{5}{6}$	$\frac{1}{2}$
$\frac{1}{8}$	$\frac{1}{5}$	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{1}{6}$

Name . . . . . Date . . . . . .

Class . . . . . .

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EXERCISE 54

Find the least common multiple:

(1) 2, 3, 4, 5, 6, 8, 10 . . . . . (4) 3, 5, 7, 15, 21, 28, 30 . . . . . .

(2) 3, 5, 7, 9, 15, 18, 21 . . . . (5) 15, 20, 25, 30, 40, 50, 60 . . . . . .

(3) 2, 4, 6, 8, 12, 18, 21 . . . . (6) 9, 12, 15, 18, 27, 30, 36 . . . . . .

Find the sum:

1.	2.	3.	4.	5.	6.
$12\frac{3}{4}$	$23\frac{5}{6}$	$13\frac{1}{5}$	$18\frac{1}{6}$	$23\frac{1}{7}$	$14\frac{3}{8}$
$9\frac{1}{2}$	$34\frac{2}{3}$	$25\frac{1}{3}$	$21\frac{2}{9}$	$14\frac{1}{4}$	$17\frac{1}{3}$
$13\frac{5}{8}$	$28\frac{1}{4}$	$31\frac{3}{10}$	$32\frac{1}{3}$	$13\frac{1}{2}$	$23\frac{1}{8}$
$11\frac{1}{8}$	$32\frac{1}{2}$	$14\frac{1}{6}$	$27\frac{4}{9}$	$16\frac{3}{7}$	$18\frac{5}{6}$
$15\frac{1}{2}$	$43\frac{1}{3}$	$23\frac{1}{2}$	$13\frac{1}{2}$	$21\frac{1}{4}$	$24\frac{1}{3}$

Find the difference:

1.	2.	3.	4.	5.	6.
$8\frac{3}{4}$	$13\frac{2}{3}$	$14\frac{3}{5}$	$11\frac{3}{4}$	$19\frac{2}{3}$	$16\frac{3}{7}$
$5\frac{1}{8}$	$8\frac{1}{6}$	$7\frac{3}{10}$	$6\frac{2}{3}$	$12\frac{1}{2}$	$9\frac{1}{4}$

7.	8.	9.	10.	11.	12.
$23\frac{1}{4}$	$43\frac{1}{3}$	$18\frac{1}{2}$	$24\frac{5}{16}$	$16\frac{2}{3}$	$21\frac{1}{6}$
$6\frac{1}{2}$	$17\frac{5}{6}$	$3\frac{7}{8}$	$19\frac{3}{4}$	$5\frac{3}{4}$	$8\frac{3}{4}$

Date.....

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EXERCISE 55

Find the difference:

1. $41\frac{2}{3} - 18\frac{1}{4} =$ .....
2. $18\frac{3}{5} - 6\frac{1}{3} =$ .....
3. $21\frac{5}{8} - 9\frac{5}{12} =$ .....
4. $32\frac{1}{2} - 18\frac{2}{3} =$ .....
5. $16\frac{3}{8} - 9\frac{5}{6} =$ .....
6. $9\frac{3}{4} - 5\frac{4}{5} =$ .....
7. $23\frac{6}{7} - 14\frac{3}{5} =$ .....
8. $22\frac{1}{6} - 14\frac{3}{8} =$ .....
9. $17\frac{2}{3} - 9\frac{3}{4} =$ .....
10. $14\frac{1}{6} - 9\frac{2}{3} =$ .....

Find the sum:

1.	2	3	4
$2356\frac{1}{4}$	$8239\frac{5}{6}$	$2345\frac{2}{9}$	$1424\frac{3}{4}$
$4127\frac{3}{8}$	$1632\frac{1}{2}$	$4374\frac{1}{6}$	$6283\frac{4}{5}$
$2635\frac{2}{3}$	$7354\frac{2}{3}$	$7253\frac{1}{2}$	$5782\frac{7}{12}$
$3213\frac{1}{2}$	$2465\frac{7}{10}$	$4294\frac{5}{9}$	$4356\frac{1}{2}$
$4562\frac{3}{8}$	$1768\frac{1}{10}$	$3728\frac{7}{9}$	$7665\frac{3}{10}$
$2756\frac{5}{6}$	$6923\frac{2}{3}$	$2435\frac{2}{3}$	$3278\frac{1}{6}$
$3254\frac{1}{4}$	$4246\frac{5}{6}$	$6284\frac{1}{9}$	$5623\frac{3}{5}$
$2799\frac{1}{6}$	$3574\frac{4}{5}$	$4777\frac{5}{9}$	$827\,6\frac{1}{3}$
$4352\frac{1}{2}$	$2763\frac{2}{3}$	$5623\frac{1}{9}$	$2317\frac{3}{10}$
$6782\frac{7}{12}$	$6342\frac{1}{2}$	$4265\frac{1}{3}$	$5983\frac{1}{3}$

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EXERCISE 56

MIXED NUMBERS—ADDITION AND SUBTRACTION

Find the sums:

1.	2.	3.	4.
$2347\frac{1}{2}$	$4693\frac{3}{10}$	$2657\frac{4}{9}$	$3362\frac{1}{4}$
$4523\frac{1}{4}$	$2758\frac{2}{3}$	$4235\frac{1}{3}$	$4578\frac{7}{12}$
$6184\frac{1}{3}$	$6235\frac{1}{6}$	$7852\frac{5}{6}$	$6457\frac{5}{6}$
$5236\frac{1}{6}$	$7382\frac{7}{10}$	$6283\frac{2}{9}$	$5629\frac{3}{4}$
$3465\frac{3}{8}$	$3567\frac{1}{2}$	$4644\frac{1}{9}$	$7428\frac{2}{3}$
$7232\frac{3}{4}$	$2483\frac{3}{5}$	$5576\frac{2}{3}$	$2932\frac{1}{2}$
$2634\frac{1}{8}$	$6938\frac{1}{3}$	$6298\frac{7}{9}$	$3885\frac{1}{12}$
$5978\frac{2}{3}$	$4253\frac{1}{10}$	$5432\frac{1}{6}$	$6935\frac{1}{6}$
$2353\frac{7}{8}$	$7646\frac{5}{6}$	$8372\frac{1}{2}$	$7286\frac{5}{12}$
$7629\frac{2}{3}$	$3582\frac{2}{5}$	$5896\frac{5}{9}$	$4989\frac{1}{3}$

Find the differences:

1. $6 - \frac{1}{3} =$ .....
2. $3\frac{1}{4} - 1\frac{1}{2} =$ .....
3. $8\frac{5}{6} - 2\frac{2}{3} =$ .....
4. $7\frac{2}{3} - 2\frac{1}{4} =$ .....
5. $\frac{8}{9} - \frac{29}{63} =$ .....
6. $4\frac{3}{4} - 1\frac{5}{6} =$ .....
7. $6\frac{1}{6} - 3\frac{3}{8} =$ .....
8. $23\frac{1}{5} - 7\frac{7}{10} =$ .....
9. $16\frac{1}{3} - 7\frac{3}{5} =$ .....
10. $27\frac{1}{6} - 14\frac{7}{12} =$ .....

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EXERCISE 57

Note: When very long columns are to be added, it is safest and easiest to do them in sections of about eight or nine numbers each. In section A, below, find the sub-totals at the points marked "S."

A.

Add:

123.57	
48.63	
153.29	
8.75	
43.59	
211.15	
362.23	
S 35.60	
163.52	
49.75	
241.68	
165.75	
133.42	
125.55	
37.23	
S 59.69	
231.18	
162.21	
9.25	
48.62	
243.71	
28.63	
147.37	
S 49.23	

Add:

236.45	
9352	
119.13	
8.67	
245.74	
218.25	
73.88	
9.24 S	
156.45	
232.27	
956	
43.22	
167.34	
8.23	
357	
246.82 S	
157.93	
29.14	
856	
234.56	
183.74	
13956	
23.42	
1425.53 S	

B

3. Add:

$\frac{3}{8}$
$\frac{2}{3}$
$\frac{5}{6}$
$\frac{5}{12}$
$\frac{5}{16}$
$\frac{7}{16}$

4. Add:

$4\frac{1}{2}$
$8\frac{2}{5}$
$3\frac{3}{4}$
$8\frac{3}{16}$
$9\frac{1}{3}$
$23\frac{7}{16}$

C.

Subtract:

5	6
$422\frac{3}{8}$	$321\frac{1}{4}$
$179\frac{3}{4}$	$178\frac{5}{8}$

D.

Multiply (mentally):

7 $23 \times 34 =$.....

8 $56 \times 23 =$.....

9 $42 \times 32 =$.....

10 $26 \times 45 =$.....

11 $48 \times 36 =$.....

12 $52 \times 49 =$_____

Total _____

Date..... .....

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EXERCISE 58

CANCELLATION.

1. $\frac{54 \times 36 \times 21}{9 \times 9 \times 7} =$ .....

2. $\frac{24 \times 8 \times 15}{18 \times 5 \times 12} =$ .....

3. $\frac{25 \times 36 \times 63}{20 \times 35 \times 27} =$ .....

4. $\frac{48 \times 35 \times 81}{18 \times 15 \times 63} =$ .....

5. $\frac{42 \times 34 \times 60}{51 \times 70 \times 12} =$ .....

6. $\frac{68 \times 91 \times 57}{65 \times 38 \times 51} =$ .....

7. $\frac{56 \times 85 \times 20 \times 78}{34 \times 26 \times 70 \times 30} =$ .....

8. $\frac{27 \times 64 \times 72 \times 87}{24 \times 58 \times 81 \times 48} =$ .....

9. $\frac{56 \times 68 \times 46 \times 25}{24 \times 119 \times 40 \times 69} =$ .....

10. $\frac{45 \times 65 \times 75 \times 95}{125 \times 52 \times 76 \times 81} =$ .....

11. $\frac{52 \times 360 \times 117 \times 57}{36 \times 152 \times 169 \times 27} =$ .....

12. $\frac{420 \times 27 \times 128 \times 50}{63 \times 48 \times 75 \times 64} =$ .....

13. $\frac{51 \times 48 \times 112 \times 36 \times 114 \times 84 \times 91}{128 \times 36 \times 68 \times 117 \times 98 \times 40 \times 133} =$ .....

14. $\frac{119 \times 150 \times 176 \times 57 \times 72 \times 49 \times 77}{105 \times 64 \times 70 \times 76 \times 84 \times 121 \times 153} =$ .....

Date.....

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EXERCISE 59

A.

Divide:

1. $\frac{3}{8} \div \frac{1}{5} =$ .....
2. $\frac{1}{3} \div \frac{1}{4} =$ .....
3. $\frac{7}{8} \div \frac{3}{4} =$ .....
4. $\frac{3}{5} \div \frac{5}{6} =$ .....
5. $1\frac{9}{16} \div \frac{2}{3} =$ .....
6. $1\frac{5}{12} \div \frac{3}{4} =$ .....
7. $\frac{3}{7} \div \frac{4}{5} =$ .....
8. $\frac{5}{9} \div \frac{2}{3} =$ .....
9. $\frac{2}{5} \div \frac{5}{6} =$ .....
10. $\frac{4}{5} \div \frac{2}{3} =$ .....

B.

Divide:

1. $19\frac{1}{2} \div 5 =$ .....
2. $31\frac{1}{5} \div 2 =$ .....
3. $23\frac{3}{4} \div 5 =$ .....
4. $14\frac{3}{8} \div 7 =$ .....
5. $17\frac{2}{3} \div 3 =$ .....
6. $23\frac{1}{5} \div 8 =$ .....
7. $7\frac{1}{8} \div 9 =$ .....
8. $9\frac{1}{3} \div 7 =$ .....
9. $15\frac{3}{4} \div 7 =$ .....
10. $133\frac{1}{3} \div 10 =$ .....

C.

Divide:

1. $7\frac{1}{3} \div \frac{1}{6} =$ .....
2. $5\frac{3}{5} \div \frac{1}{10} =$ .....
3. $9\frac{1}{16} \div \frac{1}{32} =$ .....
4. $6\frac{3}{4} \div \frac{1}{8} =$ .....
5. $3\frac{2}{3} \div \frac{1}{5} =$ .....
6. $5\frac{1}{3} \div \frac{1}{6} =$ .....
7. $7\frac{2}{3} \div \frac{1}{7} =$ .....
8. $16\frac{1}{2} \div \frac{1}{3} =$ .....
9. $34\frac{1}{2} \div \frac{1}{8} =$ .....
10. $19\frac{3}{8} \div \frac{1}{16} =$ .....

D.

Divide:

1. $62\frac{1}{2} \div 12\frac{1}{2} =$ .....
2. $66\frac{2}{3} \div 16\frac{2}{3} =$ .....
3. $87\frac{1}{2} \div 37\frac{1}{2} =$ .....
4. $75 \div 6\frac{1}{4} =$ .....
5. $83\frac{1}{3} \div 8\frac{1}{3} =$ .....
6. $8\frac{4}{7} \div 3\frac{3}{14} =$ .....
7. $10\frac{2}{3} \div 4\frac{4}{5} =$ .....
8. $11\frac{2}{3} \div 4\frac{1}{12} =$ .....
9. $72 \div 12\frac{1}{2} =$ .....
10. $50 \div 16\frac{2}{5} =$ .....

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EXERCISE 60

A.

Add:

1. $5\frac{1}{4} + 3\frac{1}{3} =$ .....
2. $8\frac{2}{3} + 6\frac{5}{6} =$ .....
3. $3\frac{1}{5} + 7\frac{3}{10} =$ .....
4. $4\frac{1}{2} + 3\frac{3}{4} =$ .....
5. $9\frac{1}{8} + 7\frac{2}{3} =$ .....
6. $8\frac{5}{12} + 7\frac{1}{3} =$ .....
7. $10\frac{1}{4} + 8\frac{1}{8} =$ .....
8. $6\frac{5}{8} + 3\frac{1}{4} =$ .....
9. $5\frac{2}{7} + 8\frac{1}{3} =$ .....
10. $8\frac{1}{2} + 5\frac{2}{3} =$ .....

B.

Subtract:

1. $11 - 4\frac{1}{4} =$ .....
2. $9\frac{2}{3} - 5\frac{1}{2} =$ .....
3. $10\frac{1}{8} - 3\frac{3}{4} =$ .....
4. $12\frac{1}{6} - 3\frac{1}{2} =$ .....
5. $14\frac{1}{4} - 9\frac{2}{5} =$ .....
6. $16\frac{1}{2} - 8\frac{1}{6} =$ .....
7. $15\frac{1}{3} - 6\frac{1}{2} =$ .....
8. $17\frac{2}{3} - 4\frac{5}{6} =$ .....
9. $12\frac{1}{2} - 5\frac{3}{4} =$ .....
10. $9\frac{1}{8} - 6\frac{3}{4} =$ .....

C.

Multiply:

1. $6\frac{1}{4} \times 1\frac{1}{15} =$ .....
2. $6\frac{1}{3} \times 7\frac{1}{2} =$ .....
3. $10\frac{2}{3} \times 7\frac{3}{8} =$ .....
4. $5\frac{2}{5} \times 6\frac{1}{3} =$ .....
5. $11\frac{2}{3} \times 5\frac{2}{7} =$ .....
6. $16\frac{1}{2} \times 13\frac{2}{3} =$ .....
7. $15\frac{3}{4} \times 2\frac{9}{14} =$ .....
8. $9\frac{1}{3} \times 4\frac{1}{7} =$ .....
9. $12\frac{3}{4} \times 5\frac{1}{3} =$ .....
10. $9\frac{1}{3} \times 9\frac{1}{3} =$ .....

D.

Divide:

1. $11\frac{1}{4} \div 4\frac{1}{6} =$ .....
2. $27 \div 3\frac{3}{5} =$ .....
3. $4\frac{4}{5} \div 6 =$ .....
4. $7\frac{5}{7} \div 5\frac{11}{14} =$ .....
5. $10\frac{5}{7} \div 2\frac{8}{21} =$ .....
6. $23\frac{1}{3} \div 12\frac{6}{7} =$ .....
7. $16\frac{1}{4} \div 4\frac{7}{8} =$ .....
8. $21\frac{1}{4} \div 11\frac{1}{3} =$ .....
9. $21\frac{2}{3} \div 10 =$ .....
10. $16\frac{4}{5} \div 4\frac{2}{3} =$ .....

Date.....

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EXERCISE 61

Make the extensions on each of the following:

1	6 Chests #1 Tea 60 lbs. ea.....lbs. @ 62¢		
2	10 Chests Salada Tea 79-11, 80-15, 80-10, 76-9, 78-11, 82-12, 79-12, 82-11, 69-7, 82-11. ..... lbs. @ 64¢		
3	20 Boxes Figs 6½lbs. ea..... lbs. @ 22½¢		
4	10 bbls. Granulated Sugar 330-22, 323-21, 329-22, 325-20, 324-22, 327-20, 321-27, 322-21, 325-21, 324-22. ..... lbs. @ 6¼¢		
5	15 pcs. Denim 38^2, 41^3, 44, 42^1, 43^2, 41^2, 39^2, 40, 41, 43, 42^3, 39^1, 41, 38^2, 42,....yds. @ 37½¢		
6	10 pcs. Flannel 37^2, 35, 36^3, 34^2, 37, 35^2, 34, 36^3, 35^1, 35.....yds. @ 42¢		
7	6 cases Rice 83, 87, 82, 84, 80, 81.....lbs. @ 7¾¢		
8	21 barrels Sugar 302, 300, 288, 298, 294, 295, 301, 297, 301, 289, 295, 292, 287, 290, 297, 298, 302, 302, 295, 287, 285. ..... lbs. @ .6½¢		
	Total		

Date.... .....

Name.... .... Class..... .. . .

Time ....

EXERCISE 62

ALIQUOT PARTS OF 100

An aliquot part of 100 is an exact fractional part of 100.

Thus $\frac{1}{2}$ of 100 = 50; $\frac{1}{3}$ of 100 = $33\frac{1}{3}$; $\frac{1}{4}$ of 100 = 25; $\frac{1}{5}$ of 100 = 20; $\frac{1}{6}$ of 100 = $16\frac{2}{3}$; 1/7 of 100 = 14 2/7; $\frac{1}{8}$ of 100 = $12\frac{1}{2}$; 1/9 of 100 = 11 1/9; 1/10 of 100 = 10, etc.

Count by sixths up to 100—thus $16\frac{2}{3}$-$33\frac{1}{3}$-50-$66\frac{2}{3}$-$83\frac{1}{3}$-100

Do the same by eighths, ninths, etc.

A short method of multiplication is based on aliquot parts. For example, to multiply 564 by $16\frac{2}{3}$, add two 0's and divide by 6—thus

$$6\overline{)56400}$$
$$9400$$

Rapidity and accuracy in handling aliquot parts is of great value in billing, and in using percentages. Apply this method hereafter, whenever possible.

(1) $48 \times 33\frac{1}{3}$ = ...

(2) 435×25 = ...

(3) $147 \times 16\frac{2}{3}$ = ...

(4) $576 \times 8\frac{1}{3}$ = ...

(5) $847 \times 9\frac{1}{11}$ = ...

(6) $648 \times 37\frac{1}{2}$ = ...

(7) $726 \times 83\frac{1}{3}$ = ...

(8) $916 \times 12\frac{1}{2}$ = ...

(9) 476×14^2 = ...

(10) 623×25 = ...

(11) $525 \times 66\frac{2}{3}$ = ...

(12) $488 \times 62\frac{1}{2}$ = ...

(13) $639 \times 11\frac{1}{9}$ = ...

(14) $456 \times 87\frac{1}{2}$ = ...

(15) $711 \times 33\frac{1}{3}$ = ...

(16) 524×75 = ...

Date..... .....

Name..... .... Class.....

Time..... .....

EXERCISE 63

PRACTICE ON ALIQUOT PARTS OF 10 AND 100.

Find the cost of the following:

1	27 articles at 16⅔¢ each		
2	147 " " 33⅓¢ "		
3	232 " " 37½¢ "		
4	170 " " 12½¢ "		
5	37 " " 25¢ "		
6	122 " " 62½¢ "		
7	135 " " 66⅔¢ "		
8	273 " " 8⅓¢ "		
9	168 " " 87½¢ "		
10	126 " " 83⅓¢ "		
11	69 yards at 6¾¢ per yd		
12	78 " " 3⅛¢ " "		
13	96 " " 6¼¢ " "		
14	114 " " 7½¢ " "		
15	94 " " 2½¢ " "		
16	112 " " 14⅔¢ " "		
17	133 " " 28⅔¢ " "		
18	234 " " 11⅑¢ " "		
19	146 " " 12½¢ " "		
20	207 " " 16⅔¢ " "		
	Total		

Name..... Date..... Class..... Time.....

EXERCISE 64

ALIQUOT PARTS OF 1000

1	327 × 250 =	
2	531 × 750 =	
3	479 × 500 =	
4	583 × 125 =	
5	429 × 375 =	
6	237 × 625 =	
7	516 × 666 2/3 =	
8	434 × 142 6/7 =	
9	525 × 833 1/3 =	
10	372 × 166 2/3 =	
11	268 × 187 1/2 =	
12	528 × 333 1/3 =	
13	2387 × 125 =	
14	1469 × 875 =	
15	1845 × 111 1/9 =	
16	2838 × 83 1/3 =	
17	1468 × 62 1/2 =	
18	1253 × 142 6/7 =	
19	1162 × 285 5/7 =	
20	1549 × 625 =	
21	1764 × 166 2/3 =	
22	1238 × 875 =	
23	1653 × 833 1/3 =	
24	2985 × 125 =	
	Total	

Date.....

Name..... Class.....

Time.....

EXERCISE 65

DECIMALS

A.

Subtract:

1. 7.1324 − 2.7936 = ...
2. 22.153 − 13.7589 = ...
3. 37.3 − 15.693 = ...
4. 15 − 5.2063 = ...
5. 162.53 − 4.0387 = ...
6. 423.5783 − 92.8 = ...
7. 173.2 − .573 = ...
8. 2.5456 − .9783 = ...
9. 14.14216 − 9.3 = ...
10. 1 − .47712 = ...

B.

Multiply:

1. 6.4 × .125 = ...
2. 52.8 × 2.5 = ...
3. 3.12 × 3.75 = ...
4. 523 × 4.27 = ...
5. 4.56 × .025 = ...
6. 616 × .0625 = ...
7. .429 × .055 = ...
8. 8.75 × 2.97 = ...
9. 12.5 × 62.4 = ...
10. .248 × 6.9 = ...

C.

Divide:

1. 9.1 ÷ 13 = ...
2. 91 ÷ .13 = ...
3. 91 ÷ 1.3 = ...
4. .91 ÷ .13 = ...
5. .91 ÷ 13 = ...
6. 11.2 ÷ .14 = ...
7. .112 ÷ 14. = ...
8. 1.12 ÷ 1.4 = ...
9. 11.2 ÷ 14 = ...
10. 1.12 ÷ 1.4 = ...

D.

Divide:

1. 1.44 ÷ 16 = ...
2. 144 ÷ .16 = ...
3. 14.4 ÷ 1.6 = ...
4. 14.4 ÷ .016 = ...
5. 1.44 ÷ 160 = ...
6. 128 ÷ .08 = ...
7. 1.28 ÷ 80 = ...
8. 12.8 ÷ .08 = ...
9. 1.28 ÷ .8 = ...
10. .0128 ÷ .08 = ...

Date.....

Name..... Class.....

Time.....

EXERCISE 66

DIVISION OF DECIMALS

A

1. 69 ÷ ·03 =
2. ·069 ÷ 3 =
3. 6·9 ÷ 30 =
4. 6·90 ÷ ·3 =
5. ·69 ÷ ·003 =
6. 4800 ÷ ·4 =
7. 4·8 ÷ ·004 =
8. ·48 ÷ 40 =
9. ·048 ÷ ·04 =
10. 480 ÷ ·004 =

B

1. 1·08 ÷ ·012 =
2. 10·8 ÷ 12 =
3. ·108 ÷ 120 =
4. ·108 ÷ ·12 =
5. 1080 ÷ ·12 =
6. 175 ÷ 2·5 =
7. ·0175 ÷ ·025 =
8. 1750 ÷ ·25 =
9. 17·5 ÷ 250 =
10. 1·75 ÷ ·25 =

C

1. 22·5 ÷ ·45 =
2. 225 ÷ 4·5 =
3. 225 ÷ ·045 =
4. 2·25 ÷ 45 =
5. ·0225 ÷ ·45 =
6. ·084 ÷ 0·14 =
7. 8·4 ÷ ·014 =
8. 84 ÷ ·14 =
9. 840 ÷ 1·4 =
10. ·084 ÷ 14 =

D

1. 100·8 ÷ 1·2 =
2. 1·008 ÷ 12 =
3. 1008 ÷ ·12 =
4. 10·08 ÷ 120 =
5. ·1008 ÷ 12 =
6. 12·87 ÷ 110 =
7. 128·7 ÷ 1·1 =
8. ·1287 ÷ 11 =
9. 128·7 ÷ 11 =
10. 1287 ÷ ·11 =

Date.....

Name..... Class .....

Time.....

EXERCISE 67

A. Change each common fraction into a decimal. Carry out each decimal until it either ends or repeats.

(1) $\frac{5}{8}$ = ...

(2) $\frac{7}{40}$ = ...

(3) $\frac{3}{16}$ = ...

(4) $\frac{2}{11}$ = ...

(5) $\frac{5}{9}$ = ...

(6) $\frac{7}{13}$ = ...

(7) $\frac{43}{172}$ = ...

(8) $\frac{37}{125}$ = ...

(9) $\frac{9}{32}$ = ...

(10) $\frac{5}{12}$ = ...

(11) $\frac{7}{75}$ = ...

(12) $\frac{19}{360}$ = ...

B. Find each quotient to the *nearest* third decimal.

$5.273\overline{)22.897}$ $29.86\overline{)1669.82}$

$.7835\overline{)56.6501}$ $.008356\overline{)7.53775}$

Date.....

Name.....Class.....

Time.....

EXERCISE 68

A. What is the meaning of the following abbreviations?

1. M.
2. Cwt.
3. N.S.F.
4. C.O.D.
5. #
6. F.O.B.
7. B/L
8. C.
9. *i.e.*
10. O.H.M.S.

B. Multiply and add.

(1)	(2)
2.5 × .25 = ...	$16\frac{1}{2} \times 18 =$ .....
4.5 × 44.6 = ...	$28\frac{1}{2} \times 48 =$ .....
.48 × 3.5 = ...	$16\frac{2}{3} \times 27 =$ .....
.86 × 4.5 = ...	$71\frac{1}{2} \times 66 =$ .....
.84 × .375 = ...	$37\frac{1}{2} \times 44 =$ .....
.57 × 6 = ...	$25\frac{3}{4} \times 40 =$ .....
.019 × 24.3 = ...	$55\frac{1}{2} \times 22 =$ .....
16 × 4.32 = ...	$27\frac{3}{4} \times 16 =$ .....
.035 × 25.6 = ...	$12\frac{1}{2} \times 24 =$ .....
8.64 × 2.58 = ...	$62\frac{1}{2} \times 40 =$ .....
Total _____	Total _____

Date.....

Name.... .....Class.....

Time.....

EXERCISE 69

A. 1. In Column (1) place a check mark opposite the numbers in which digits 2 and 7 occur.
2. In Column (2) place a check mark opposite the numbers in which digits 3 and 5 occur.
3. In Column (3) place a check mark opposite the numbers in which digits 3 and 4 occur.
4. Check the numbers in which three or more of the digits are even numbers.

No.		1	2	3	4
1	512434			✓	
2	723743	✓		✓	
3	238456		✓	✓	✓
4	177867				
5	325578	✓	✓		
6	993389				
7	649920				
8	476692				
9	281264				
10	872741				
11	566357				
12	953537				
13	774426				
14	395862				
15	838688				
16	727244				
17	559775				
18	484593				
19	242918				
20	243454				
21	371767				
22	635624				
23	556886				
24	196772				
25	767549				
26	823941				
27	642159				
28	975398				
29	239737				
30	451174				
31	784825				
32	347678				
33	573256				
34	192413				
35	968513				
36	836964				
37	727842				
38	715789				
39	259971				
40	914138				

B. Copy below the first twenty numbers which occur in the columns at the left and find their sum.

1 5 1 2 4 3 4
2 7 2 3 7 4 3
3
4
5 .....
6
7
8
9
10 .....
11
12
13
14
15 .....
16
17
18
19
20 _____

Date ....

Name .... Class ..... .

Time..... ..

EXERCISE 70

1. In column (1) place a check mark opposite the numbers in which digits 2 and 5 occur.

2. In column (2) place a check mark opposite the numbers in which 3 and 7 occur.

3. In column (3) place a check mark opposite the numbers in which any digit occurs more than once.

4. In column (4) check opposite each number which contains at least four odd digits.

		1	2	3	4
1	352476				
2	485931				
3	772953				
4	137246				
5	713895				
6	427385				
7	814969				
8	729354				
9	318726				
10	502976				
11	557841				
12	639872				
13	660845				
14	375941				
15	102573				
16	688730				
17	148273				
18	324589				
19	576018				
20	307446				
21	456321				
22	874685				
23	943851				
24	724084				
25	632978				
26	358537				
27	579321				
28	875237				
29	741749				
30	493658				
31	618795				
32	856493				
33	495217				
34	224882				
35	634374				
36	786514				

5. How many times does the digit "9" occur in the numbers at the left.

6. Copy below the numbers occurring in the even places in the column at the left and find their sum.

2	4 8 5 9 3 1
4	1 3 7 2 4 6
6	
8	

Sum

Name ..... Date .....

Class .....

Time .....

EXERCISE 71

Express as percentages:—

1. $\frac{1}{2}$ = ...
2. $\frac{1}{3}$ = ...
3. $\frac{1}{4}$ = ...
4. $\frac{1}{5}$ = ...
5. $\frac{1}{6}$ = ...
6. $\frac{1}{7}$ = ...
7. $\frac{1}{8}$ = ...
8. $\frac{1}{9}$ = ...
9. $\frac{1}{10}$ = ...
10. $\frac{1}{12}$ = ...
11. $\frac{1}{15}$ = ...
12. $\frac{1}{16}$ = ...
13. $\frac{1}{20}$ = ...
14. $\frac{1}{25}$ = ...
15. $\frac{1}{40}$ = ...
16. $\frac{1}{50}$ = ...
17. $\frac{1}{80}$ = ...
18. $\frac{3}{8}$ = ...
19. $\frac{2}{3}$ = ...
20. $\frac{2}{5}$ = ...
21. $\frac{3}{5}$ = ...
22. $\frac{5}{8}$ = ...
23. $\frac{4}{5}$ = ...
24. $\frac{1}{11}$ = ...
25. $\frac{3}{10}$ = ...
26. $\frac{7}{8}$ = ...
27. $\frac{3}{4}$ = ...
28. $\frac{8}{12}$ = ...
29. $\frac{6}{25}$ = ...
30. $\frac{8}{10}$ = ...
31. $\frac{15}{16}$ = ...
32. $\frac{14}{15}$ = ...
33. $\frac{7}{12}$ = ...
34. $\frac{9}{16}$ = ...
35. $\frac{8}{32}$ = ...
36. $\frac{4}{25}$ = ...
37. $\frac{1}{200}$ = ...
38. $\frac{5}{16}$ = ...
39. $\frac{3}{20}$ = ...
40. $\frac{11}{32}$ = ...
41. $\frac{5}{6}$ = ...
42. $\frac{7}{10}$ = ...
43. $\frac{5}{32}$ = ...
44. $\frac{3}{400}$ = ...

Date.....

Name..... Class.....

Time .....

EXERCISE 72

A.

Express the following fractions as percentages:

1. $\frac{1}{8}$ = ...
2. $\frac{1}{4}$ = ...
3. $\frac{3}{8}$ = ...
4. $\frac{1}{2}$ = ...
5. $\frac{1}{3}$ = ...
6. $\frac{1}{6}$ = ...
7. $\frac{3}{4}$ = ...
8. $\frac{2}{3}$ = ...
9. $\frac{5}{6}$ = ...
10. $\frac{5}{8}$ = ...
11. $\frac{7}{8}$ = ...
12. $\frac{1}{12}$ = ...
13. $\frac{1}{15}$ = ...
14. $\frac{1}{16}$ = ...
15. $\frac{1}{20}$ = ...
16. $\frac{1}{25}$ = ...
17. $\frac{5}{12}$ = ...
18. $\frac{1}{10}$ = ...
19. $\frac{1}{5}$ = ...
20. $\frac{4}{5}$ = ...
21. $\frac{3}{5}$ = ...
22. $\frac{6}{25}$ = ...
23. $\frac{3}{32}$ = ...
24. $\frac{1}{32}$ = ...
25. $\frac{9}{10}$ = ...
26. $\frac{1}{7}$ = ...
27. $\frac{11}{12}$ = ...
28. $\frac{15}{16}$ = ...
29. $\frac{12}{50}$ = ...
30. $\frac{1}{40}$ = ...

B.

1. 20% of 825 = ...
2. $33\frac{1}{3}$% of 795 = ...
3. $16\frac{2}{3}$% of 360 = ...
4. $37\frac{1}{2}$% of 408 = ...
5. $12\frac{1}{2}$% of 480 = ...
6. 75% of 1260 = ...
7. $8\frac{1}{3}$% of 144 = ...
8. 40% of 525 = ...

Total _____

9. $6\frac{1}{4}$% of 480 = ...
10. 10% of 143.50 = ...
11. 25% of 308 = ...
12. $62\frac{1}{2}$% of 252 = ...
13. 20% of 425 = ...
14. $62\frac{1}{2}$% of 216 = ...
15. 5% of 1280 = ...
16. 24% of 375 = ...

Total _____

Date.....

Name..... Class.....

Time.....

EXERCISE 73

A. Express as fractions in their lowest terms:

(1) 25% = ...
(2) 4% = ...
(3) 10% = ...
(4) $87\frac{1}{2}\%$ = ...
(5) $6\frac{1}{4}\%$ = ...
(6) $\frac{1}{2}\%$ = ...
(7) $33\frac{1}{3}\%$ = ...
(8) $37\frac{1}{2}\%$ = ...
(9) $12\frac{1}{2}\%$ = ...
10. 5% = ...
11. $62\frac{1}{2}\%$ = ...
12. $16\frac{2}{3}\%$ = ...
13. $83\frac{1}{3}\%$ = ...
14. 30% = ...
15. $1\frac{1}{2}\%$ = ...
16. 50% = ...
17. $66\frac{2}{3}\%$ = ...
18. 75% = ...

B. What fraction of a dollar is

(1) $33\frac{1}{3}¢$ = ...
(2) 25¢ = ...
(3) 20¢ = ...
(4) $8\frac{1}{3}¢$ = ...
(5) $87\frac{1}{2}¢$ = ...
(6) 75¢ = ...
(7) $16\frac{2}{3}¢$ = ...
(8) $12\frac{1}{2}¢$ = ...
(9) $14\frac{2}{7}¢$ = ...
(10) $6\frac{1}{4}¢$ = ...
(11) $37\frac{1}{2}¢$ = ...
(12) 40¢ = ...
(13) $62\frac{1}{2}¢$ = ...
(14) $83\frac{1}{3}¢$ = ...
(15) $3\frac{1}{8}¢$ = ...

C.

(1) 25% of a number is 45, what is the No.? = ...
(2) 5% " " " " 125, " " " " = ...
(3) $37\frac{1}{2}\%$ " " " " 42, " " " " = ...
(4) $16\frac{2}{3}\%$ " " " " 60, " " " " = ...
(5) $33\frac{1}{3}\%$ " " " " 25, " " " " = ...
(6) $12\frac{1}{2}\%$ " " " " 48, " " " " = ...
(7) 10% " " " " 17, " " " " = ...
(8) $\frac{1}{2}\%$ " " " " 27, " " " " = ...
(9) 3% " " " " 42, " " " " = ...
(10) 8% " " " " 40, " " " " = ...
(11) $\frac{1}{8}\%$ " " " " 35, " " " " = ...

Date.....

Name..... Class.....

Time.....

EXERCISE 74

Calculate the following percentages and total the results.

A.		B.	
1.	10% of 1280 = ...	19.	$\frac{1}{2}$% of 600 = ...
2.	5% of 640 = ...	20.	$37\frac{1}{2}$% of 864 = ...
3.	25% of 432 = ...	21.	$8\frac{1}{3}$% of 528 = ...
4.	20% of 75 = ...	22.	2% of 400 = ...
5.	$33\frac{1}{3}$% of 930 = ...	23.	$2\frac{1}{2}$% of 1440 = ...
6.	$6\frac{1}{4}$% of 144 = ...	24.	15% of 860 = ...
7.	50% of 432 = ...	25.	$16\frac{2}{3}$% of 1236 = ...
8.	$16\frac{2}{3}$% of 450 = ...	26.	6% of 450 = ...
9.	$66\frac{2}{3}$% of 291 = ...	27.	$1\frac{1}{4}$% of 1680 = ...
10.	4% of 850 = ...	28.	4% of 625 = ...
11.	$8\frac{1}{3}$% of 348 = ...	29.	$62\frac{1}{2}$% of 648 = ...
12.	40% of 1710 = ...	30.	25% of 3652 = ...
13.	12% of 350 = ...	31.	$3\frac{1}{3}$% of 510 = ...
14.	15% of 1140 = ...	32.	$\frac{1}{4}$% of 1600 = ...
15.	$12\frac{1}{2}$% of 1080 = ...	33.	$\frac{1}{8}$% of 1000 = ...
16.	80% of 920 = ...	34.	24% of 700 = ...
17.	$\frac{1}{8}$% of 10000 = ...	35.	$\frac{1}{4}$% of 4000 = ...
18.	$\frac{3}{5}$% of 1500 = ...	36.	$\frac{3}{4}$% of 2400 = ...
	Total		Total .....

1. 180 is what % of 720? .....
2. 75 " % " 600? .....
3. 125 " % " 1000? .....
4. $37\frac{1}{2}$ " % " 300? .....
5. $62\frac{1}{2}$ " % " 450? .....
6. 625 " % " 500? .....
7. 250 " % " 225? .....
8. 27 ins. is what % of 1 yd.? .....
9. 1320 ft. " % " 1 mile? .....
10. 600 lbs. " % " 1 ton? .....
11. $255 " % " $2040? .....
12. 219 da. " % " 1 yr.? .....
13. $4.20 " % " $210? .....
14. 24 ft. " % " 60 ft.? .....

Date.....

Name..... Class.....

Time.....

EXERCISE 75

		A	B	C
1	25%	$16.00	$11.40	$145.00
2	12½%	4.80	16.00	3.60
3	10%	15.00	3.50	123.80
4	37½%	48.00	14.40	4.00
5	33⅓%	12.60	15.30	26.70
6	4%	$250.00	$16.50	$8.75
7	75%	24.00	320.00	2.80
8	125%	64.00	10.80	445.00
9	62½%	3.20	16.80	234.20
10	50%	19.50	3.80	1124.00
11	8⅓%	$6.40	$128.00	$28.80
12	20%	3.60	102.00	12.85
13	150%	1.40	65.50	127.60
14	6¼%	64.00	12.80	2560.00
15	½%	100.00	250.00	37500.00
16	16⅔%	$38.00	$10.20	138.00
17	1¼%	48.00	13.60	2720.00
18	31¼%	448.00	115.20	640.00
19	3⅓%	59.10	386.70	90.00
20	1½%	224.60	876.00	1124.00
		Total	Total	Total

Date.....

Name..... Class.....

Time.....

EXERCISE 76

A. Weekly Sales in a Department Store. Calculate the per cent which each day's sales is of the total, also the per cent for each department:

Day	Dept. A	Dept. B	Dept. C	Total	Per Cent
Monday .	$385.86	$424.16	$356.57	.....	.....
Tuesday..	283.55	305.15	249.37	.....	.....
Wednesday	415.23	287.92	195.85	.....	.....
Thursday.	538.72	411.95	315.83	.....	.....
Friday...	398.74	279.65	326.15	.....	.....
Saturday.	410.27	329.85	298.32	.....	.....
Total....					
Per cent.					100%

B. Multiply

$24 \times .12\frac{1}{2} =$ .....

$32 \times .25 =$ .....

$48 \times .37\frac{1}{2} =$ .....

$30 \times .06\frac{2}{3} =$ .....

$96 \times .87\frac{1}{2} =$ .....

$48 \times .06\frac{1}{4} =$ .....

$9 \times 66\frac{2}{3} =$ .....

C. Divide

2874 by $12\frac{1}{2} =$ .....

3254 by $33\frac{1}{3} =$ .....

4758 by 125 = ...

4875 by $16\frac{2}{3} =$ .....

5428 by $37\frac{1}{2} =$ .....

Date .....

Name..... Class .....

Time.....

EXERCISE 77

A. Calculate the per cent. of month's sales made by each salesman:

Sales No.	Amt. of Sales	Per cent. of Total
110	$1254.00	.....
111	1860.00	.....
112	2684.00	.....
113	1675.00	.....
114	1589.00	.....
115	1975.00	.....
116	2287.00	.....
Total		100.00%

B. Find the per cent. that the expense of each department is of the total expense:

Dept.	Expense	Per cent.
A	$354.00	.....
B	780.60	.....
C	466.50	.....
D	1055.25	.....
E	873.40	.....
Total		100.00%

C. Find the per cent. increase or decrease for each department:

Dept.	Sales Feb. 1929	Sales Feb. 1930	Increase or *decrease	% of increase or decrease
A	22,765.00	25,825.00	.....	.....
B	17,654.00	16,782.00	.....	.....
C	23,550.00	20,875.00	.....	.....
D	18,266.00	23,588.00	.....	.....
E	12,755.00	18,927.00	.....	.....

Date . . . . . .

Name.... . . . . Class..... ....

Time..... ....

EXERCISE 78

A. Find the value of

1. 1764 lbs. Feed @ $2.85 per cwt. ....
2. 28690 ft. Lumber @ $35.75 per M. ....
3. 3882 lbs. Hay @ $26.75 per ton .....
4. 23625 Bricks @ $28.50 per M. .....
5. 15960 lbs. Coal @ $15.75 per ton .....
6. 1650 fence posts @ $19.75 per C. .....

Total _____

B. Find to the nearest tenth of 1% what per cent. each o the following numbers is of their sum.

	Per cent.
555.60	.....
87.50	.....
1265.45	.....
14872.26	.....
5338.95	.....
Total	100.%

C. Divide 5400 by 437.2983 correct to nearest cent.

437.2983)5400

Date.....

Name..... .....Class .....

Time .....

EXERCISE 79

A. Complete the following by filling in the blanks. Individual sales compared with Average and Maximum.

	Sales	% of Average	% of Max.
John Smith.....	$176.32	.....	.....
Albert Brown.....	263.05	.....	.....
Jas. Jones.....	97.60	.....	.....
Walter Dunn.....	140.58	.....	.....
G. Hampson.....	201.94	.....	.....
H. Bates.....	306.71	.....	100%
Frank Houston.....	109.50	.....	.....
Average.....	.....	100%	

B. Find the cost of

1. 1764 lbs. feed.....@ $2.75 per C. .....
2. 28490 ft. of lumber.@ $43.75 per M. .....
3. 3682 lbs. hay.....@ $22.75 per ton.....
4. 13425 bricks.....@ $31.45 per M. .....
5. 18490 lbs. of coal..@ $14.90 per ton.....
6. 2975 fence posts...@ $16.50 per C. .....
7. 24600 shingles.....@ $8.75 per M. .....
8. 13450 ft. lumber ...@ $53.50 per M. .....
9. 13890 lbs. coal.....@ $15.50 per ton.....
10. 38476 lbs. wheat....@ $ 1.21 per bu.....

Total = _____

Date .....

Name..... .....Class.....

Time.....

EXERCISE 80

PATTERSON & CO.

DATE Apr. 10, 19 ,
SOLD TO James Bruce & Co.,
ADDRESS 42 Yonge St.,
Toronto, Ont.

OUR NO 421
VIA Delivery
TERMS 5/10 n/30

	2	doz. Tables-each	11.40		
		less 20%			
	15	Extension Tables	28.00		
		less 12½%			
	6	doz. Dining Chairs-per doz.	22.00		
	4	Bedsteads #421	26.50		
	7	Library Tables	42.60		
		less 25%			
	2	Walnut Sets-each	320.00		
		less 33 1/3%			
	4	Chesterfields-each	250.00		
		less 25%			

A. How much will settle the above bill

(1) On Apr. 15th, 19—? (2) On May 1st, 19—?

B. What part of

(1) 1 dollar is 20¢? .....
(2) 1 yard is 4 in.? .....
(3) 1 mile is 480 ft.? .....
(4) 1 week is 10 min.? .....
(5) 1 lb. Troy is 4 oz.? .....
(6) 1 year is 146 days? .....
(7) 10 dollars is 20¢? .....
(8) 1 day is 6 hours? .....
(9) 1 bu. is 3 gals.? .....
(10) 1 ton is 400 lbs.? .....
(11) 1 ream is 20 sheets ?.....
(12) 1 meter is 25 mm.? .....
(13) 1 kilogram is 40grm?.....
(14) 1 sq. mile is 100 ac.? .....

Name..... Class.....

Date.....

Time.....

EXERCISE 81

Find the net amount of each of the following:

1

PATTERSON & CO.

PAPER RULERS & BOOKBINDERS

YOUR ADDRESS

DATE June 1, 19 .
SOLD TO Mr. John Clay,
ADDRESS Sarnia, Ontario.

OUR NO. 5218
VIA C.N.R.
TERMS Net 30 Days.

	450	H.S. Arithmetic	.40			
	240	History of Canada	.80			
	50	Pocket Dictionary	.20			
	800	P.S. Speller	.25			
	320	Julius Caesar	.40			
	600	National Notebook	.20			
		Discount 20%				

2

Brown Brothers Limited

Mytown, Canada

ORDER NO. 10
INVOICE NO. 2818
VIA C.N.R.
TERMS 30 Days
DATE May 1, 19
SUBJECT TO DRAFT
CAR NO.
YOUR ORDER NO. 453

SOLD TO Mr. Gordon Payne,
ADDRESS Brantford, Ont.

PURCHASER'S RECORD

PUR. ORDER	
PRICES	
CALCULAT'NS	
DATE REC'D	
REC'D BY	
FREIGHT O. K.	
PUR. J. PAGE	
COSTED	
PERP. INVT.	

APPROVED

ACCOUNT

	800	pcs. 6" Pipe	$ .80			
	115	pcs. 15" Pipe	2.70			
	115	pcs. 24" Pipe	6.50			
	550	pcs. 8" Pipe	.80			
	36	pcs. 8" Couplings	1.40			
	100	pcs. 6" Ells	1.10			
		Less 40%				

Date.....

Name..... Class.....

Time.....

EXERCISE 82

Find a single rate of discount equivalent to each of the following series:

1. 10% and 10% = ...
2. 20% and 10% = ...
3. 25% and 10% = ...
4. 30% and 30% = ...
5. 30% and 20% = ...
6. 30% and 10% = ...
7. 40% and 20% = ...
8. 40% and 25% = ...
9. 25% and 30% = ...
10. $33\frac{1}{3}$% and 10% = ...
11. 60% and $12\frac{1}{2}$% = ...
12. 20% and 15% = ...
13. 25% and 5% = ...
14. 60% and 20% = ...
15. 5% and 5% = ...
16. $12\frac{1}{2}$% and 4% = ...

Find a single rate equivalent to each of the following series:

1. 20%, 20% and 10% = ...
2. 10%, 10% and 5% = ...
3. 50%, 20% and 5% = ...
4. 30%, 10% and 10% = ...
5. $33\frac{1}{3}$%, $12\frac{1}{2}$% and 10% = ...
6. 40%, 10% and 10% = ...
7. 40%, 5% and 5% = ...
8. 60%, 10% and 5% = ...
9. 20%, 15% and 10% = ...
10. 20%, 25% and 10% = ...

Date.....

Name..... Class.....

Time.....

EXERCISE 83

Calculate the discount and the net price for each of the following transactions.

	List Price	Discount Rates	Discount	Net Price
1	$455.00	33⅓% and 20%		
2	640.00	25% " 10%		
3	1400.00	20% " 12½%		
4	960.50	10% " 10%		
5	1272.00	25% " 5%		
6	87.90	20% " 10%		
7	2460.00	33⅓% " 15%		
8	680.00	16⅔% " 10%		
9	720.00	37½% " 12½%		
10	1040.00	25% " 12½%		
11	395.80	30% " 10%		
12	85.50	25% " 15%		
13	475.90	30% " 5%		
14	2850.00	25%, 10% and 5%		
15	1280.00	33⅓%, 10% " 2%		
16	452.80	30%, 10% " 3%		
17	727.60	20%, 10% " 5%		
18	1000.00	40%, 10% " 5%		
19	2634.75	15%, 5% " 2%		
20	1850.00	30%, 20% " 10%		
			Total	

Name..... Date.....

Class.....

Time.....

EXERCISE 84

A.

PHONE N. 685

THE CANADIAN TYPEWRITER CO.

TEMPLE BUILDING
VICTORIA & KING STS.
YOUR ADDRESS

OUR NO. 654
VIA Delivery
TERMS

DATE March 1, 19 .
SOLD TO Mr. George Warner,
ADDRESS 65 Bank Street,
Ottawa, Ont.

PUR. ORDER	
PRICES	
CALCULAT'NS	
DATE REC'D	
REC'D BY	
FREIGHT O. K	
PUR. J. PAGE	
COSTED	
PERP. INVT.	

	4	Roll Top Desks	57.00				
	6	Flat Top Desks	45.00				
	10	Dining Tables	22.00				
	10	Sets D. R. Chairs	18.00				
	9	Sideboards	72.50				
	12	China Cabinets	42.50				
		less 25% & 20%					

B.

THE CANADIAN IMPORTING CO.

HARDWARE

MYTOWN CANADA

DATE April 11, 19 .
SOLD TO Mr. Frank Dodd,
ADDRESS Markham, Ontario.

OUR NO 192
VIA C.P.R.

	4	Gross Machine Bolts 3/4 x 6" less 40% and 10%	7.20				
	4	doz. Screw-drivers less 25%	6.60				
	3	doz. Planes less 12½%	10.50				
	2½	doz. Saws #8 less 20%	30.00				

C. Find the S.P. of each article in B to gain 33⅓% on cost.

S.P. Machine Bolts, ... each

Screw Drivers .....

Planes .....

Saws .....

Name..... Date.....

Class..... ....

Time..... .....

EXERCISE 85

A

W. J. GRAY LIMITED
48 COLLEGE ST. WEST
YOUR ADDRESS

DATE Jan. 9, 19 .
SOLD TO Mr. Arthur Wainwright,
ADDRESS 122 St. Paul St.,
St. Catharines, Ont.

TERMS 2/10, 1/30, n/60

	4	doz. Crescent Padlocks	3.75				
	½	doz. Stillson Wrenches #2	10.50				
		40/10/5%					
	2½	doz. XX Axes	15.00				
		10/5%					

B

THE CANADIAN IMPORTING CO.
HARDWARE
SMYTOWN CANADA

DATE Mar. 15, 19 .
SOLD TO Mr. James Morrison,
ADDRESS Leamington, Ont.

OUR NO. 113
VIA Express
TERMS 1/20, n/30.

	2	doz. Locks #212	4.25				
	1½	doz. Cupboard Fasts	3.25				
	½	doz. Dixon 18" Saws	24.00				
		25/20%					
	2	Water Power Washers	30.00				
	1	Blue Bird Electric	150.00				
		10/5%					

Date .....

Name..... Class.....

Time.....

EXERCISE 86

A.

RICE LEWIS & SON, Limited, Toronto, May 1, 1919

Terms: 90 days net Sold to D. MYERS & CO., Stratford.

	Or. No.	Quan.	Size	Description	Price	Gross		Net	
	11146	348′–9″	1 inch	Pipe 47½, 4-10's, 5%	11¾	$40	98	$13	40
		109′–4″	5 inch	Pipe 57½, 3-10's, 7½%	1 42				
		16	1 inch	Globe Valves 67½, 10, 5%	2 90				
		60	1×8	Nipples 85, 7½%	47				
		75	2 inch	Couplings 65, 5%	60				
		25	1×6	Flanges 80, 10%	95				
		125	1¼	Ells 75, 10%	35				
		55	2½×2×1	Tees 65, 10, 5%	1 75				
		6		Fin. Water Gauges 55, 10, 2½%	12 00				

B.

Billing Exercise

Mar.	4	1 bag Salt, 13; 2 Old Dutch, 20; Pepper, 10; 5 Sugar, 32; Cabbage, 10; Celery, 15; 1 lb. Fig Bars, 35; 1 lb. Dates, 20; ¼ lb. Shelled Walnuts, 16			
	5	1 Vanilla, 25; 1 Rasp. Jam, 49; 1 lb. Sodas, 18; 5 boxes Lux, 50; 4 lbs. Onions, 29 2 Carrots, 20; 3 Lemons, 10; 5 Brown Sugar, 32; 1 lb. Bacon, 45; 1 Lettuce, 15			
	6	6 Chops, 53; 3 lbs. Butter, 1.44; 1 Cabbage 19; 1 Green Pepper, 16; 1½ doz. Eggs, 87; 2 Cans Peas, 38			
	7	10 Chops, 75; Nutmegs, 10; 2 Currants, 20; 1 Rasp. Jam, 49			

Date.....

Name..... Class.....

Time .....

EXERCISE 87

Brown Brothers Limited

Mytown, Canada

ORDER NO. 143
INVOICE NO. 2362
VIA C.P.R.
TERMS 2%/30, n/60. SUBJECT TO DRAFT
DATE May 1, 19 CAR NO. YOUR ORDER NO. 23

SOLD TO Mr. I. M. Owen,
ADDRESS Gloucester, Ont.

PURCHASER'S RECORD

PUR. ORDER	
PRICES	
CALCULAT'NS	
DATE REC'D	
REC'D BY	
FREIGHT O. K.	
PUR. J. PAGE	
COSTED	
PERP. INVT.	

APPROVED | ACCOUNT

6	only Black Bushings 1" to ¾"	ea.	.06						
6	only Black Bushings ½" to 3/8"	ea.	.04						
	Less 60%								
1/3	doz. Stop and Waste Cocks #673		19.20						
	Less 70%								
¼	doz. Economy Cobbler Sets		5.25						
2	doz. Centre Bits 1 1/8"		1.20						
½	gro. Sash Lifts #15		2.25						
	Less 5%								
3/10	ream Imperial Sand Paper 1/0		2.45						
97	lb. Manilla Rope 7/8"		.13⅓						
	Less 10%								
5	sets Iron Bed Casters	Net	.09½						
1	only Coal Chute #B (each)	Net	7.90						
½	doz. Floor Shine Polish, 4 oz.	Net	1.50						
2½	lb. Belt Lacing 3/8"	Net	1.05						
½	doz. Brass Locks #508		1.80						
¼	doz. Mower Knife Files #763		7.80						
	Less 60%, 10%								
	Total Invoice								
	Add Sales Tax 3%								
	Less Allowance for Expres							1	20
	Net Invoice								

Name

Date

Class

Time

EXERCISE 88

Find the Gain.

	A.				B.		
	Cost	Per Cent. Gain	Gain		Cost	Per Cent. Gain	Gain
(1)	40.00	25		(1)	150.00	40	
(2)	150.00	$33\frac{1}{3}$		(2)	220.00	50	
(3)	2654.50	10		(3)	168.00	$37\frac{1}{2}$	
(4)	37.25	20		(4)	40.00	$62\frac{1}{2}$	
(5)	750.00	$16\frac{2}{3}$		(5)	51.00	$33\frac{1}{3}$	
(6)	720.00	$8\frac{1}{3}$		(6)	320.00	$6\frac{1}{4}$	
(7)	1240.00	5		(7)	48.00	$12\frac{1}{2}$	
(8)	180.00	$2\frac{1}{2}$		(8)	300.00	$66\frac{2}{3}$	
(9)	640.00	$7\frac{1}{2}$		(9)	768.00	25	
		Total				Total	

Find the per cent. of Gain or Loss.

	C.				D.		
	Cost	Gain	% Gain		Cost	Loss	% Loss
(1)	250.00	50.00		(1)	76.00	19.00	
(2)	110.00	33.00		(2)	140.00	28.00	
(3)	140.00	14.00		(3)	200.00	25.00	
(4)	80.00	16.00		(4)	420.00	21.00	
(5)	150.00	25.00		(5)	65.00	6.50	
(6)	90.00	45.00		(6)	257.60	51.52	
(7)	15.00	10.00		(7)	97.50	32.50	
(8)	44.00	5.50		(8)	240.00	16.00	
(9)	160.00	4.80		(9)	320.00	80.00	
(10)	320.00	16.00		(10)	65.50	26.50	
(11)	75.00	100.00		(11)	90.00	25.00	

Date.....

Name.....Class.....

Time.....

EXERCISE 89

GAIN CALCULATED AS PERCENTAGE OF COST.

(1) Find the Selling Price.

	Cost Price	Gain	Selling Price
1.	$560.	12½ %	
2.	640.	10 %	
3.	210.	33⅓ %	
4.	960.	16⅔ %	
5.	320.	20 %	
6.	156.	25 %	
7.	160.	40 %	
8.	520.	5 %	
9.	780.	37½ %	
10.	465.	30 %	
		Total	

(2) Find the Cost.

	Selling Price	Gain (% on cost)	Cost
1.	$552.	20 %	
2.	792.	10 %	
3.	1000.	25 %	
4.	1045.	10 %	
5.	1395.	12½ %	
6.	420.	40 %	
7.	280.	16⅔ %	
8	220.	33⅓ %	
9.	550.	37½ %	
10.	160.	14²⁄₇ %	
		Total	

Date.....

Name.....Class.....

Time .....

EXERCISE 90

Fill in the blank spaces indicated below.

No.	Cost	Gain %	Loss %	Selling Price
1	64.80	12½%		.....
2	475.60		15%	.....
3	21.60	.....		27.00
4	474.00		.....	395.00
5	.....		37½%	11.30
6	.....	20%		27.36
7	62.50	10%		.....
8	75.00		25%	.....
9	.....		20%	140.00
10	.....	25%		325.00
11	27.80	.....		30.58
12	.....		20%	130.00
13	.....		33⅓%	444.00
14	142.00	.....		198.80
15	120.00		.....	108.00
16	312.40		25%	.....
17	210.30	16⅔%		.....
18	.....		12½%	630.00
19	.....	35%		4050.00
20	.....		2%	7105.00
21	1234.56	.....		1440.32

Date.....

Name..... Class.....

Time.....

EXERCISE 91

A. A dealer bought four horses which he sold as follows:-

	Cost	Gain %	Gain	Loss %	Loss	Selling Price
1	248.00	10				
2	165.00	20				
3	180.00			12½		
4	265.00			25		
Total Cost					Total S. P.	

Find gain or loss % on cost.

B. A man sold five horses as follows:-

	Selling Price	Gain %	Loss %	Cost
1	240.00	20		
2	240.00		25	
3	180.00	10		
4	300.00	12½		
5	160.00		20	
Total S.P.				Total Cost

Find total gain or loss % on cost.

C. Add:-

56	385	2785	7467
28	957	6847	8595
16	694	7654	3983
17	873	9382	9675
18	769	4785	8587
87	588	6874	6976
29	327	4359	9835
32	659	2968	9875
96	564	7375	5687
84	832	9987	6979
73	796	5874	7765
37	458	6736	9824
19	927	5582	5676

Name ..... Date .....

Class .....

Time .....

EXERCISE 92

A. Calculate the per cent of profit on sales in the different departments.

Dept. No.	Sales	Cost of goods sold	Profit	Per cent of profit on sales
A	3,865.20	3,258.60		
B	4,067.25	3,123.62		
C	6,758.50	6,275.35		
D	1,268.98	852.63		
E	4,267.62	3,571.50		
F	4,778.92	4,125.67		
G	5,834.65	4,992.52		
H	3,767.62	3,245.15		
I	5,726.61	4,873.55		
J	2,749.25	1,996.85		

B. In the following record, distribute the expense $9,375.84 over the five departments on the basis of the sales.

Department	Sales	Per cent	Expenses
A	10,327.80		
B	12,257.60		
C	8,745.20		
D	15,264.75		
E	25,765.50		
		100%	$9,375.84

Name..... Date.....

Class.....

Time.....

EXERCISE 93

A.

Toronto, Nov. 5, 19--

Purchase of Merchandise for account of
H. R. Cassells,
Ottawa, Ont.

By

WHITE & CO.
COMMISSION MERCHANTS

4974 bu. Potatoes..... .75				
7596 bu. Potatoes..... .80				
5673 bu. Potatoes..... .84				
Charges:				
Freight.....		75	60	
Comm. 2%.....				
Am't charged to your %				

B.

Sales on Account

Toronto, June 5 19--

Sale of Merchandise for account of
W. G. Slack,
Essex, Ont.

By

ONTARIO PRODUCE CO.

1500 doz. Eggs.....@ .28				
3050 lbs. Butter.....@ .38				
6420 lbs. Cheese.....@ .22				
Charges:				
Drayage and freight.....		114	50	
Comm. 2%.....				
Storage.....		8	15	
Amount credited to your %....				

Name ..... Date ..... Class ..... Time .....

EXERCISE 94

Calculate the Commission and make the extensions.

A.

Sales	Rate	Comm.	Proceeds
$247.50	3%		
165.00	2%		
274.00	2½%		
150.48	5%		
243.60	3½%		
642.00	1½%		
256.60	2%		
Total	Total		

B.

Purchases	Rate	Comm.	Gross Cost
$525.50	6⅔%		
647.60	2%		
910.30	5%		
672.60	1½%		
812.40	4%		
272.60	3%		
550.00	2½%		
765.00	2%		
Total	Total		

C.

Find the 'marked' price, so that the dealer may give the discounts indicated and still make his desired profit.

Cost	Gain	Dis-count	Marked Price	Cost	Gain	Dis-count	Marked Price
$ 50	20%	10%		$ 65	40%	10%	
$160	25%	12½%		125	30%	12½%	
$360	33⅓%	15%		24	50%	5%	

Date.....

Name.....Class.....

Time.....

EXERCISE 95

A. Find the net proceeds of the following sales:

450	bbls. Apples...@ $3.75	.....	....			
440	" " ...@ 4.20	.....	....			
675	" " ...@ 5.00	.....	....			
800	" " ...@ 7.50	.....	....			
65	" " ...@ 3.75	.....	....			
95	" " ...@ 6.00	.....	....			
110	" " ...@ 5.50	.....	....			
230	" " ...@ 4.00	.....	....	.....	....	
	Charges:					
	Storage.....$ 10.60	.....	....			
	Freight.....$160.75	.....	....			
	Insurance.... 3.25	.....	....			
	Cartage..... 75.00	.....	....			
	5% Commission.....	.....	....	.....	....	
	Net Proceeds					

B. Fill in the blank spaces in the schedule below.

	Amount of Sale	Rate of Comm.	Agent's Comm.	Net Proceeds
1	$1450.00	2½%	.....	.....
2	.....	1%	$16.50	.....
3	$1200.00	.....	42.00	.....
4	112.50	.....	.....	100.00
5	.....	.....	3.50	95.00
6	.....	4%	.....	192.00

Date.....

Name..... .....Class.....

Time.....

EXERCISE 96

A Find the commission and net proceeds from each of the following sales.

	Sale	Rate	Commission	Proceeds
1	10,000.00	$\frac{1}{2}\%$		
2	3,600.00	2%		
3	6,250.80	$3\frac{1}{2}\%$		
4	4,480.20	4%		
5	7,280.00	$2\frac{1}{2}\%$		
6	2,524.50	$4\frac{1}{2}\%$		
7	12,000.00	$1\frac{1}{2}\%$		
8	2,522.35	4%		
9	25,000.00	$\frac{1}{2}\%$		
10	875.80	4%		
11	352.50	5%		
12	2,848.20	2%		

B Find the commission and total cost of each of the following purchases.

	Cost	Rate	Commission	Other Expenses	Total Cost
1	587.60	3%		12.75	
2	2,675.00	$1\frac{1}{2}\%$		114.50	
3	10,250.00	$\frac{1}{2}\%$		27.63	
4	5,587.00	2%		122.00	
5	955.80	4%		27.50	
6	15,000.00	$\frac{1}{2}\%$		23.60	
7	4,200.00	1%		125.32	
8	570.00	$3\frac{1}{2}\%$		12.15	
9	5,250.00	4%		210.60	
10	675.00	$2\frac{1}{2}\%$		58.50	
11	25,000.00	$\frac{1}{4}\%$		27.67	
12	6,790.50	5%		125.30	

C Find the commission and net proceeds from each of the following sales.

	Sale	Rate	Commission	Proceeds
1	242.31	$1\frac{1}{2}\%$		
2	1,497.69	2%		
3	2,764.72	$2\frac{3}{4}\%$		
4	42.16	1/8%		
5	760.12	$1\frac{1}{4}\%$		

Date.....

Name..... Class.....

Time.....

EXERCISE 97

A. Find the net proceeds of the following consignment.

100	bu. Potatoes.....@	$ .98	.....	....		
75	" " .....@	.63	.....	....		
200	" Wheat.....@	1.18	.....	....		
150	" " .....@	1.00	.....	....		
120	" " .....@	1.40	.....	....		
18	bbls. Flour.....@	6.75	.....	....		
220	" " .....@	7.75	.....	....		
300	" " .....@	5.75	.....	....		
139	bu. Wheat.....@	1.60	.....	....		
155	" " .....@	1.35	.....	....	.....	....
	Charges:					
	Storage, 4¢ per bu.		.....	....		
	10¢ " bbl.		.....	....		
	Cartage.....			176	52		
	Freight.....			195	80		
	Commission 5%.....		.....	....	.....	....
	Net Proceeds					

B. Find the cost of 54 bbls. of oil at $37\frac{1}{2}$¢ per gallon. Number of gallons in each bbl. as follows.

33	41	37	42	38	45	
35	39	39	39	33	38	
37	38	38	38	37	37	
34	40	37	36	39	42	
38	37	37	37	35	41	.....gals. @ $37\frac{1}{2}$¢
36	33	35	35	33	37	
35	32	39	39	41	39	= .....
34	35	41	33	42	37	
42	34	40	35	47	42	

Date.....

Name.....Class.....

Time..... .....

EXERCISE 98

H. G. BAKER & CO.
Manufacturer and Importer

Sold to
Menzies Bros.,
Galt, Ont.

6 doz.	Silk Ties, ea.....	$ .37½	.....	....	.....	....
3 doz.	Lawn Ties, per gross..	2.94	.....	....	.....	....
38 doz.	Linen Collars, Assorted sizes, doz...	1.92	.....	....	.....	....
18 doz.	Police Suspenders, doz.....	4.37½	.....	....	.....	....
9 doz.	Khaki Overalls, doz...	8.96	.....	....	.....	....
6 doz.	Boys' Shirts, doz.....	10.20	.....	....	.....	....
10 doz.	Men's Work Shirts, doz.....	12.40	.....	....	.....	....
2¼ doz.	Men's Broadcloth Shirts, doz.....	16.80	.....	....	.....	....
	Less 20% and 10%					

INSURANCE

Calculate the premium on each of the following policies.

	Policy	Rate	Premium
(1)	$ 2,800	⅝%	.....
(2)	$ 3,500	70¢ per $ 100	.....
(3)	$15,200	¾%	.....
(4)	$ 6,750	60¢ per $ 100	.....
(5)	$12,800	85¢ per $ 100	.....
(6)	$ 9,200	⅞%	.....
(7)	$ 5,000	$22.50 per $1000	.....
(8)	$16,500	$52.50 per $1000	.....
(9)	$ 1,820	55¢ per $ 100	.....
(10)	$26,000	$33.20 per $1000	.....
		Total	

Name..... Date.....

Class..... .....

Time..... ....

EXERCISE 99

By filling in the blanks, express each of the rates below in all of the other equivalent forms.

	Common Fraction	Decimal Fraction	Per-centage	Cents on One Dollar	Dollars on $100	Mills on One Dollar	Dollars on $1000
1	$\frac{1}{50}$	.02	2%	2	2.00	20	20.00
2					3.50		
3						45	
4							16.00
5				$3\frac{1}{4}$			
6			$2\frac{7}{8}\%$				
7	$\frac{1}{40}$						
8		.052					
9	$\frac{3}{160}$						
10			$3\frac{1}{3}\%$				

Date.....

Name..... Class.....

Time.....

EXERCISE 100

A

Find the tax rate in mills correct to nearest $\frac{1}{2}$ mill in each of the following:

	Assessed Value	Estimated Expenditure	Rate
1	$25,000,000	$600,000	.....
2	$7,875,000	$283,500	.....
3	$50,166,639	$852,833	.....
4	$269,866,219	$4,721,189	.....
5	$909,984,965	$29,649,547	.....

B

1. Find the tax rate in mills correct to nearest $\frac{1}{2}$ mill for a town where the assessed value is $696,535,003 and the expenditure is $23,076,988. .....

2. Calculate the tax to be paid, at the above rate, by each of following.

	Assessment	Tax
A.	$10,120	.....
B.	$6,820	.....
C.	$15,500	.....
D.	$3,870	.....
E.	$2,450	.....
F.	$22,800	.....
G.	$5,480	.....

Date.....

Name.....Class.....

Time.....

EXERCISE 101

Calculate to the nearest cent the amount of taxes levied by the following towns and cities.

	Assessment	Mill Rate	Tax
Aurora	$ 1,550,250	40	
Bowmanville	2,262,400	43	
Brantford	26,814,010	39.5	
Brockville	6,955,500	41	
Carleton Place	1,950,650	53	
Cobalt	1,381,480	80	
Dundas	4,817,530	32	
Forest	925,350	37	
Fort William	30,576,200	36	
Goderich	2,990,000	49.5	
Guelph	13,504,000	42	
Mount Forest	866,520	42	
Ottawa	145,838,250	31.7	
Peterborough	22,615,875	37	
St. Thomas	16,269,350	34.5	
St. Catharines	22,218,410	38	
Stratford	14,783,320	36	
Toronto	926,027,510	31.8	
Windsor	74,865,220	35.5	
Woodstock	7,456,315	36.75	
		Total	

Name..... Date.....
Class.....
Time.....

EXERCISE 102

A. 19–

City of .....

Assessment = $589,168,086
Taxes levied = $ 14,897,062
Net debt = $123,575,268
Population = 473,829

Find to two decimal places:

(1) The tax rate in mills. .....

(2) The amount of taxes per capita .....

(3) The amount of net debt per capita. .....

B. In the schedule below fill in the blanks and calculate the per cent on the sales of each item.

Summary JANUARY	Sales 13958.60 Amount	% on Sales
Gross profit on sales	4175 80	
Less Expense Rent	380 00	
Advertising	410 60	
General Expense	485 87	
Salaries	3125 00	
Freight and Express	78 12	
Total Expense		
Net Loss / Profit on Sales		
Add: Cash Discounts rec'd.		
Total Net Profits	287 50	

Date.....

Name ..... Class.....

Time .....

EXERCISE 103

INCOME TAX.

Income tax is calculated on the following basis.
Personal exemptions are granted as follows:
(a) $3000 in case of a married person, or householder.
(b) $1500 in case of unmarried persons.
(c) $500 for each child under 21 years of age who is dependent on the taxpayer for support.

The schedule below shows the tax to be calculated after all exemptions are deducted. From the amount so calculated the taxpayer may deduct 20%.

SCHEDULE

	Rate
On the first $2000 of income or any portion thereof.....	2%

On am't in excess of	But not in excess of	
2000	3000	3%
3000	4000	4%
4000	5000	5%
5000	6000	6%

And thereafter up to a limit of 20,000 at 6%

Calculate the tax to be paid by each of the following taxpayers.

	Income	Name		Exemption	Tax
(1)	$7500	A. W. Bruils	Married	3 children	.....
(2)	3850	R. T. White	Unmarried	Householder	.....
(3)	15750	William Calder	Married	5 children	.....
(4)	10250	R. G. Moore	Married	4 children	.....
(5)	3800	Mary Smith	Unmarried		.....
(6)	2650	E. P. Cole	Unmarried		.....

Note: In No. 3 assume that on all taxable income in excess of $5,000 the taxpayer pays at the rate of 6%.

Name..... Date.....

Class.....

Time.....

EXERCISE 104

CHEQUE REGISTER

Number of Cheque	Date	Favour of	For What	Amount	Deposits	Balance
	Feb.					
	1	Balance			$856 93	$856 93
258	1	S. K. Smith	Rent Feb.	90 00		
9	1	P. T. Jones	On Acct.	234 50		
260	1	Daily News	Pay Advtg.	68 78	163 28	
1	2	A. R. Brown	Inv. No. 763	263 29		
2	2	M. T. Dalley	Inv. No. 764	58 65		
3	2	Bell Tel. Co	Feb. Bill	11 45	37 42	
4	3	S. R. Black & Co	Inv. No. 765	23 79		
5	3	Cash	Pay Roll	168 35		
6	3	City Gas Co	Feb. Bill	13 62	134 79	
7	5	Brown & Green Ltd	On Acct.	56 00		
8	5	R. J. Fletcher	Inv. No. 766	79 35	62 85	
9	6	C. M. Brooks	Pay Note	88 65		
270	6	R. M. Stanley	Repairs	23 78	125 00	
1	7	Globe Fire Ins. Co	Premium	29 83		
2	7	City Treasurer	Taxes	139 57	278 77	
3	7	A. B. Hill & Son	Inv. No. 767	16 79		
4	7	C. D. House & Co	On Acct.	74 38		
			Balance Forward			

How could you prove your work? Do so.

Date .....

Name..... Class.....

EXERCISE 105

Time.....

Find the balance of each depositor and check the results by totals. Depositor's Ledger, Friday, May ——

Depositor	Balance	Cheques	Total Cheques	Deposit	Balance
Atkins, H	387 25	15 87 103 25 7 54		75 00	
Arnold, H	1045 65	110 80 27 59 213 65		387 78	
Asman, H	327 65	27 80 15 63 75 00		310 50	
Barnes, C	1015 72	21 50 75 25 123 30		750 87	
Brendon, R	773 75	64 20 110 73 225 50		672 80	
Carter, R.H.	327 15	16 28 72 50 45 75		127 55	
Carlyle, J	2127 65	125 54 210 87 58 65		389 50	
Calder, Geo	1585 92	47 28 587 60 25 95 14 50		568 75	
Cameron, R	685 95	27 86 450 50 18 27		325 80	
Collins, C.	558 72	25 95 215 20 48 65		212 53	
Dale, Frank	1125 83	27 96 115 60		275 95	
Totals					

(Note that if the total of first balance column be added to the total deposits and the total cheques be subtracted, the result should be the total of the final balance column.)

Date.....

Name..... Class.....

Time.....

EXERCISE 106

A.

Find the interest at 4%:

(1) $480.50 for 47 days .....

(2) 324.80 for 27 days .....

(3) 76.55 for 33 days .....

Total

B.

Find the interest at 6%:

(1) $1260.00 for 73 days .....

(2) 2752.80 for 47 days .....

(3) 755.60 for 108 days .....

Total

C.

Find the interest at $3\frac{1}{2}$%:

(1) $875.60 for 27 days .....

(2) 78.95 for 35 days .....

(3) 560.70 for 71 days .....

Total

Date.....

Name..... Class.....

Time.....

EXERCISE 107

Find the interest at 6% per annum on each of the following:

1.	$230.60 for 75 days	.....
2.	875.20 for 113 days	.....
3.	86.00 for 210 days	.....
4.	325.50 for 37 days	.....
5.	2,855.00 for 18 days	.....
6.	385.00 for 70 days	.....
7.	657.00 for 227 days	.....
8.	298.00 for 125 days	.....
9.	548.60 for 90 days	.....
10.	462.30 for 63 days	.....
11.	15,580.00 for 15 days	.....
12.	28,800.00 for 7 days	.....
13.	950.60 for 245 days	.....
14.	435.90 for 327 days	.....
15.	$250,000.00 for 5 days	.....
	Total	

Date.....

Name..... Class.....

Time.....

EXERCISE 108

A. Find the number of days.

1. From June 15, 1929 to Oct. 7, 1929 = ...
2. From Apr. 11, 1930 to Dec. 15, 1930 = ...
3. From Nov. 3, 1929 to Apr. 23, 1930 = ...
4. From Dec. 10, 1929 to June 26, 1930 = ...
5. From Jan. 18, 1930 to Oct. 4, 1930 = ...
6. From Feb. 3, 1930 to July 28, 1930 = ...
7. From Mar. 10, 1929 to Apr. 15, 1930 = ...
8. From Sept. 5, 1930 to Nov. 23, 1930 = ...
9. From Sept. 22, 1929 to Apr. 5, 1931 = ...
10. From Nov. 10, 1930 to Mar. 15, 1931 = ...

B. Find the time in years and days.

1. From Dec. 12, 1930 to Apr. 27, 1932 = ...
2. From Oct. 15, 1928 to Mar. 2, 1930 = ...
3. From July 9, 1929 to Dec. 17, 1932 = ...
4. From Aug. 5, 1914 to Nov. 11, 1918 = ...
5. From Dec. 11, 1925 to July 1, 1930 = ...
6. From Oct. 27, 1930 to Mar. 21, 1934 = ...
7. From Apr. 12, 1929 to July 31, 1933 = ...
8. From Jan. 15, 1930 to Aug. 23, 1934 = ...
9. From Nov. 4, 1929 to Apr. 15th, 1932 = ...
10. From Apr. 13th, 1930 to Dec. 25, 1933 = ...

Date..... .. ..

Name.....Class.....

Time.....

EXERCISE 109

A. How many days

	From	To	Days
1	May 15, 1928	Oct. 21, 1928	
2	Feb. 10, 1929	July 15, 1929	
3	Nov. 15, 1929	Jan. 23, 1930	
4	Oct. 22, 1929	Apr. 15, 1930	
5	Jan. 10, 1930	Mar. 27, 1930	
6	Apr. 20, 1931	Oct. 11, 1931	
7	Dec. 3, 1932	June 15, 1933	

B. Find the interest on the following:

	Principal	Time	Rate	Interest	
1	275.00	73 da.	6%		
2	450.80	110 da.	7%		
3	2,370.60	87 da.	6½%		
4	44.80	203 da.	5%		
5	27,650.00	12 da.	6%		
			Total		

C. Find the interest on the following:

	Principal	From	To	Rate	Interest	
1	380.00	May 10, 1928	Oct. 15, 1928	6%		
2	1,564.80	Nov. 18, 1929	Feb. 16, 1930	7%		
3	766.40	Oct. 22, 1930	Aug. 15, 1931	7½%		
4	126,400.00	May 5, 1930	May 12, 1930	6%		
5	4,650.00	Feb. 15, 1930	June 10, 1931	6½%		
				Total		

Date .....

Name.....Class.....

Time.....

EXERCISE 110

A. Find the interest on:

1. $4654, from Aug. 13, 1929 to May 25, 1930, at 5%.

Answer.....

2. $7380, from June 2, 1930, to Dec. 15, 1930, at 6%.

Answer.....

3. $4550, from Oct. 22, 1931, to Mar. 9, 1932, at 8%.

Answer.....

4. $158.60, from Dec. 3, 1930, to Nov. 15, 1932, at 7%.

Answer.....

B. Write and total the following extensions:

(1)	(2)
24 lbs. at $33\frac{1}{3}¢$ = ...	120 yds. at $16\frac{2}{3}¢$ = ...
30 lbs. at $66\frac{2}{3}¢$ = ...	84 yds. at $37\frac{1}{2}¢$ = ...
76 lbs. at $12\frac{1}{2}¢$ = ...	64 yds. at $87\frac{1}{2}¢$ = ...
72 lbs. at $37\frac{1}{2}¢$ = ...	288 yds. at $62\frac{1}{2}¢$ = ...
64 lbs. at $6\frac{1}{4}¢$ = ...	120 yds. at $12\frac{1}{2}¢$ = ...
Total = _____	Total = _____

C. Multiply $56\frac{1}{8} \times 31\frac{1}{4}$ = ...

$87\frac{3}{8} \times 1\frac{7}{8}$ = ...

Total = _____

Date.....

Name..... Class.....

Time.....

EXERCISE 111

A. Find the Interest on:

	Sum	From	To	Rate	Interest
1	$978.40	Feb. 28, 1930	Sept. 13, 1930	6%	
2	1760.00	June 10, 1931	Mar. 24, 1932	7%	
3	12000.00	Feb. 14, 1932	Oct. 1, 1933	5½%	
4	4260.50	June 30, 1933	Jan. 1, 1934	7%	
5	586.74	May 18, 1933	Dec. 14, 1934	6%	
6	8600.00	Mar. 11, 1931	Dec. 10, 1932	6%	
7	1426.54	May 28, 1931	Dec. 24, 1932	7%	
8	126.45	July 1, 1932	Mar. 24, 1933	6½%	
9	1736.40	July 17, 1931	June 1, 1932	5%	
10	2275.80	Oct. 5, 1930	Apr. 10, 1931	8%	
11	1592.15	June 21, 1931	Nov. 27, 1934	10%	
12	143.30	Jan. 25, 1931	Sept. 2, 1931	8%	
				Total	

B. Make the extensions, and find the total for each.

(1)

1250 bu. @ $.96 = ...
333⅓ " @ 1.17 = ...
375 " @ 1.28 = ...
187½ " @ 2.24 = ...
166⅔ " @ 1.65 = ...
260 " @ .62½ = ...
32 " @ .37½ = ...
62½ " @ 2.60 = ...
312½ " @ .13½ = ...
68¾ " @ .14½ = ...
Total .....

(2)

426 yds. @ $3.33⅓ = ...
286 " @ 1.66⅔ = ...
382 " @ 1.87½ = ...
333⅓ " @ 2.25 = ...
2500 " @ 1.34 = ...
1625 " @ 2.32 = ...
86 " @ .62½ = ...
427¼ " @ .12½ = ...
91½ " @ 3.12½ = ...
69¾ " @ 1.87½ = ...
Total .....

Name .... Date.....

Class.....

Time . . . . .

EXERCISE 112

STORAGE

A. Calculate the charges for storage at 5¢ per bbl. per term of 30 days average storage.

Date		Receipt	Deliveries	Balance	Days in Storage	Equivalent for One Day
Apr.	5	210 bbls				
May	3		40 bbls			
May	15	160 "				
May	31		80 "			
June	15		160 "			
June	25		75 "			
June	28		15 "			
					Cost of Storage.....	

B. Storage of potatoes. Calculate the charges for storage at 3¢ per bag per term of 30 days.

		Receipts	Deliveries	Balance	Days in Storage	Equivalent for One Day
Sept.	15	850 bags				
Oct.	8		200 bags			
Oct.	10	900 "				
Nov.	10	780 "				
Dec.	15		510 "			
Dec.	18		480 "			
Jan.	4		300 "			
Jan.	15		620 "			
Feb.	10		420 "			
					Cost of Storage.....	

Date.....

Name..... Class.....

Time.....

EXERCISE 113

CHEQUE REGISTER

	Date	Favor of	For What	Am't	Deposits	Balance
	Dec.					
	1	Balance			$1731 95	$1731 95
235	1	J. H. Stoveld	Repairs	$21 50		
36	1	R. J. Baron	Rent	84 50		
37	1	B. Simpson & Co.	Dress	119 50	187 50	
38	2	Evening Telegram	Adv't.	22 75		
39	2	R. H. Elder & Co.	Inv. 187	120 00		
240	2	Howard & Tames	Inv. 188	285 60		
41	3	P. Doan & Son	Inv. 189	196 50	375 40	
42	3	Cash	Pay Roll	185 00		
43	4	Bell Tel. Co.	Teleph.	47 25	510 54	
44	4	Wm. E. Fritz	On Acct.	150 00		
45	5	Essex Trust Co.	Int.	210 00	275 00	
46	5	Harry G. March	Inv. 190	257 40		
47	6	Eastbrook & Luby	Inv. 191	58 65		
48	6	J. E. Stewart Co.	Inv. 192	147 55	442 52	
49	7	Con. Gas Co.	Bill	9 75		
250	7	Bilden & Snow	On Acc't.	210 00	297 27	
51	8	Wyinore & Co.	Inv. 193	157 85		

Date.....

Name .....Class.....

Time.....

EXERCISE 114

Find the balance of each depositor and check the result by totals. Depositor's Ledger, Oct. 10, 19--

Depositor	Balance	Cheques	Total Cheques	Deposit	Balance
Armstrong W	235.58	271.62 110.16 8.95		215.30	
Baird Alex	710.62	48.75 122.65 15.26		115.35	
Bedford J.T.	1246.25	7.54 49.50 273.28		410.16	
Blake L.J	448.53	113.20 57.62 95.30		127.60	
Campbell F.	210.10	18.52 35.87 7.95		132.40	
Chadwick H.	714.52	52.16 114.20 17.10		98.00	
Colby W M	1240.18	14.75 203.15 78.50 129.35		275.50	
Draycott R	233.16	52.50 87.35 16.80		215.23	
Eaton Geo.	1417.25	38.75 113.50 325.00 27.89		132.527	
Ellis John	178.15	27.38 73.54		115.45	
Totals					

(Note that if the total of first balance column be added to the total deposits, and the total cheques be subtracted, the result should be the total of the final balance.)

Date.....

Name ..... Class.....

Time.....

EXERCISE 115

PARTIAL PAYMENTS

On March 1, 1928, Mr. J. Jones bought a city lot for $1500. He paid $300 cash, and agreed to pay 6% interest per annum on the unpaid balance. He made the payments listed below. What sum does he owe on Feb. 3, 1930?

Date	Remaining Debt	Payment	Interest to date	Reduction in Debt	Balance
Mar. 1, 1928	$ 1500.00	$ 300.00	.....	.....	.....
June 16, 1928	.....	100.00	.....	.....	.....
Oct. 15, 1928	.....	120.00	.....	.....	.....
Dec. 31, 1928	.....	145.00	.....	.....	.....
Apr. 1, 1929	.....	75.00	.....	.....	.....
Oct. 7, 1929	.....	100.00	.....	.....	.....
Feb. 3, 1930	.....	.....	.....	.....	.....

Date.....

Name..... Class.....

Time.....

EXERCISE 116

Brown Brothers Limited

Mytown, Canada

ORDER NO. 272
INVOICE NO. 5762
VIA C.N.R.
TERMS 2%/30,n/60.
DATE May 1, 19

YOUR ORDER NO. 51

SOLD TO Messrs. P.J. Kelly & Co.,
ADDRESS Stratford, Ont.

PURCHASER'S RECORD

PUR. ORDER	
PRICES	
CALCULAT'NS	
DATE REC'D	
REC'D BY	
FREIGHT O. K.	
PUR. J. PAGE	
COSTED	
PERP. INVT	

APPROVED | ACCOUNT

5	rolls Tarred Paper #2	.43	2	15				
5	rolls Plain Building Paper #2	.30	1	50	3	65		
	Less 5%					18	3	47
2	rolls Netting #18	5.50						
3	rolls Netting #30	8.50						
	Less 45%							
1/3	doz. Beet Hoes #167	8.50						
¼	doz. Garden Rakes #141	4.85						
	Less 40%, 12½%							
2	only Unions ½"	.22						
	Less 65%							
½	doz. Putty Knives #6761	1.90						
½	doz. Faucets #323½	1.35						
	Less 5%							
2	doz. Carpet Tacks 6 oz.	.90						
3	doz. Carpet Tacks 8 oz.	1.10						
	Less 75%, 12½%							
1/6	doz. 1 Peck Iron Measures	5.45						
¼	doz. ½ Peck Iron Measures	4.00						
	Less 40%, 5%							
¼	doz. Screen Doors #1, 2'6" x 7'	8.70						

Date.....

Name.. .... Class.....

Time .....

EXERCISE 117

On April 1, 1928, Mr. Smith bought a used car for $500. He gave $100 down and agreed to pay interest at 6% per annum on the unpaid balance. He made the payments listed below. How much would settle the debt on Dec. 25, 1929?

Date	Remaining Debt	Payment	Interest to Date	Reduction in Debt	Balance
Apr. 1, 1928	$ 500.00	$ 100.00	....	. . . .	... .
July 12, 1928	.....	50.00	.....	....	.....
Sept. 29, 1928	....	3.00	... .	....	.....
Nov. 15, 1928	....	75.00	... .	....	.....
Dec. 26, 1928	....	50.00	....	....	....
Mar. 15, 1929	....	75.00	.....	.....	.....
July 15, 1929	....	100.00	.....	... ...	....
Dec. 25, 1929	....	.....	. ...	... .	....

Name..... Date .....
Class.....
Time.....

EXERCISE 118

Find the date when each of the following notes is due:

No.	Date of Note	Time to run	When Due
1.	January 2	3 mos.	
2.	July 15	60 days	
3.	February 7	30 days	
4.	April 25	2 mos.	
5.	November 10	3 mos.	
6.	August 15	50 days	
7.	October 19	100 days	
8.	November 30	3 mos.	
9.	December 23	11 mos.	
10.	June 18	36 days	
11.	May 5	90 days	
12.	September 10	75 days	
13.	April 15	65 days	
14.	March 13	153 days	
15.	December 27	3 mos.	
16.	January 18, 1929	90 days	
17.	October 25	2 mos.	
18.	February 14	60 days	
19.	May 27	3 mos.	
20.	March 29	90 days	

Date.....

Name.....Class.....

Time.....

EXERCISE 119

A. When are the following notes due?

	Dated	Drawn for	Due
1	Jan. 13, 1928	1 mo.	
2	Jan. 30, 1928	30 days	
3	Apr. 15, 1929	3 mos.	
4	Apr. 25, 1929	90 days	
5	June 15, 1929	6 mos.	
6	Mar. 23, 1932	2 mos.	
7	Nov. 26, 1930	3 mos.	
8	Dec. 26, 1930	60 days	
9	Nov. 30, 1931	3 mos.	
10	Dec. 29, 1931	60 days	

B. Find the amounts of the following notes when due:

	Prin.	Drawn	Time	Rate of Int.	Due	Int.	Amt.
1	280.00	Oct. 10/29	3 mos.	5%			
2	1250.00	Jan. 6/32	90 days	6%			
3	787.60	Nov. 20/31	3 mos.	7%			
4	6760.80	Apr. 15/31	2 mos.	5%			
5	27462.90	May 22/30	1 mo.	8%			
6	1285.40	June 10/30	30 days	6½%			
7	875.80	Aug. 15/29	3 mos.	6%			
8	1250.00	18/5/30	90 days	6½%			
9	5570.00	10/7/29	30 days	7%			
10	25600.00	23/8/30	3 mos.	8%			

Name..... Date.....
Class.....
Time.....

EXERCISE 120

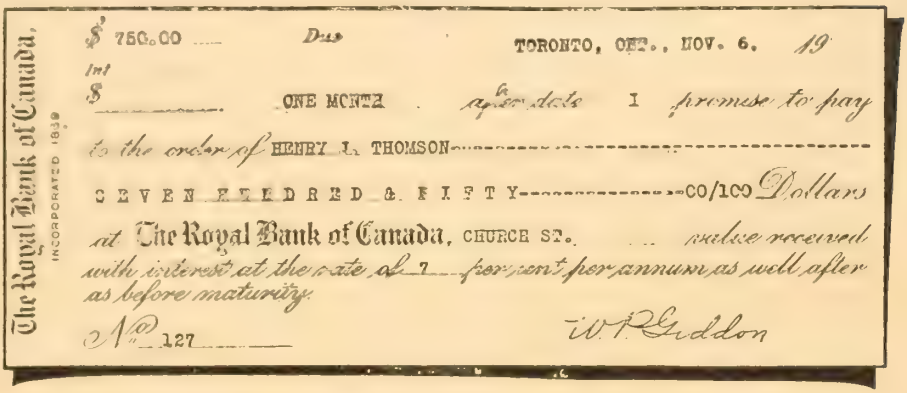
A.

BANK DISCOUNT

Find the days of discount of the following:

	Date	Time	Discounted	Days of Discount
1	Apr. 15, 1929	60 days	Apr. 25, 1929	.....
2	Jan. 5, 1930	3 mos.	Jan. 12, 1930	.....
3	Nov. 16, 1930	90 days	Dec. 3, 1930	.....
4	Mar. 22, 1931	2 mos.	Mar. 30, 1931	.....
5	Aug. 5, 1932	3 mos.	Aug. 11, 1932	.....
6	Dec. 23, 1931	90 days	Jan. 3, 1932	.....
7	Sept. 7, 1932	2 mos.	Sept. 17, 1932	.....
8	Nov. 11, 1932	60 days	Nov. 18, 1932	.....

B.


The Royal Bank of Canada,
INCORPORATED 1869
$ 750.00
Due
TORONTO, ONT., NOV. 6, 19
Int
$
ONE MONTH after date I promise to pay
to the order of HENRY L. THOMSON
SEVEN HUNDRED & FIFTY--- 00/100 Dollars
at The Royal Bank of Canada, CHURCH ST.
with interest at the rate of 7 per cent. per annum as well after
as before maturity.
No. 127
W. R. Giddon

1. Find the due date ....., and amount of note when due .....

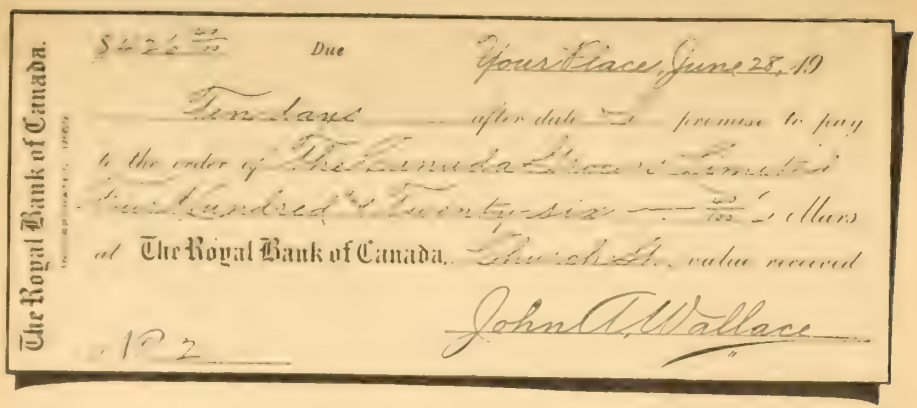
2. The note is discounted Nov. 14th, at 8%. Find
   (1) The days of discount.
   (2) The amount of discount.
   (3) The proceeds of the note.

Date.....

Name..... .....Class.....

Time.....

EXERCISE 121



Canada Grocers Limited discounts this note at the bank on July 2nd; the discount rate is 7%.

Find: (1) The due date. .....

(2) The days of discount. .....

(3) The amount of discount. .....

(4) The proceeds of the note. .....

Add:

(1)	(2)	(3)
40% of $150.....	9% of $50.....	30% of $200.....
6% of $36.....	160% of $80.....	8⅓% of $125.....
8% of $24.....	37½% of $60.....	6¼% of $160.....
5% of $80.....	125% of $72.....	87½% of $120.....
15% of $21.....	⅛% of $1000.....	16⅔% of $96.....
20% of $180.....	2½% of $580.....	48% of $60.....
12½% of $56.....	18% of $132.....	225% of $72.....
Total	Total	Total

Name..... Date.....

Class.....

Time.....

EXERCISE 122

DISCOUNT OF NON-INTEREST-BEARING NOTE

Find the proceeds of the following notes:

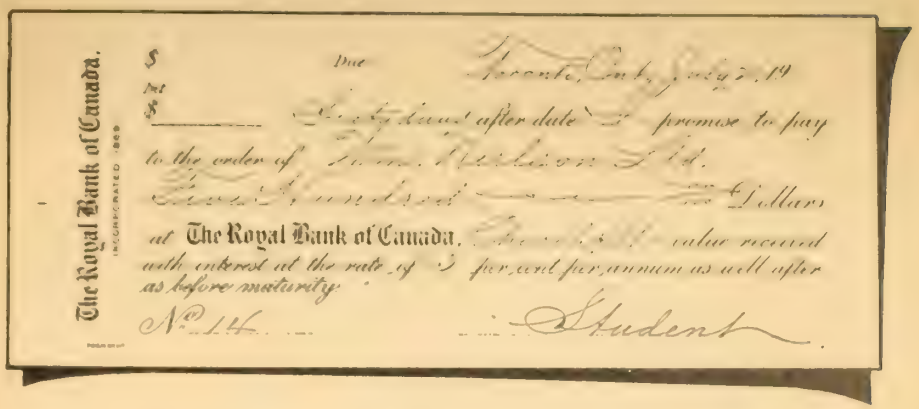
	Face of Note	Date of Note	Time of Note	Date of Maturity	Date of Discount	Days of Discount	Rate of Dis.	Discount	Proceeds
1	$500.00	Nov. 15/28	3 mos		Dec. 5/28		8%		
2	1250.60	Apr. 6/28	6 mos		May 1/28		7%		
3	7300.00	June 3/29	60 dys.		June 6/29		6%		
4	1460.00	Dec. 1/29	4 mos.		Dec. 10/29		7%		
5	2100.00	Dec. 15/29	90 dys.		Dec. 15/29		8%		
6	765.80	Aug. 10/29	9 mos.		Oct. 12/29		6½%		
7	12,600.00	Jan. 15/30	3 mos.		Jan. 15/30		7½%		
8	975.00	Oct. 3/31	60 dys.		Oct. 15/31		7%		
9	495.60	3/5/30	90 dys.		8/5/30		6½%		
10	325.50	23/6/30	4 mos.		5/7/30		8%		
						Total			

Date.....

Name.....Class.....

Time.....

EXERCISE 123


The Royal Bank of Canada.
Due
Toronto, Ont., July 2, 19
after date I promise to pay
to the order of
Dollars
at The Royal Bank of Canada
value received
with interest at the rate of per cent per annum as well after
as before maturity
No. 14
Student

A. Wm. Nerlson Ltd. discounts this note at the bank on July 30. The discount rate is 7%.

Find the following:

1. Due date of note.
2. Amount of note at maturity.
3. Days of discount.
4. Amount of discount.
5. Proceeds of the note.

B. Find the marked price so that the dealer may give discounts indicated and still make his desired profit.

Cost	Gain	Dis.	Marked Price	Cost	Gain	Dis.	Marked Price
25.00	20%	5%	.....	90.00	50%	10%	.....
175.00	25%	5%	.....	24.50	40%	10%	.....
400.00	30%	10%	.....	72.00	25%	5%	.....
78.50	40%	5%	.....	58.40	30%	10%	.....
18.40	30%	2%	.....	120.00	25%	5%	.....

Name..... Date.....

Class.....

Time.....

EXERCISE 124

DISCOUNT OF INTEREST-BEARING NOTES

Find the proceeds of the following notes:

	Face of Note	Date of Note	Time of Note	Rate of Int.	Date of Maturity	Int.	Amt. of Note	Date of Discount	Days of Discount	Rate of Dis.	Discount	Proceeds
1	$1000.00	Aug. 4/29	6 mos.	7%				Sept. 3/29		8%		
2	560.00	Dec. 15/29	90 dys.	8%				Dec. 18/29		7%		
3	1460.00	June 11/28	3 mos.	6%				June 15/28		7%		
4	758 60	Apr. 3/30	9 mos.	6½%				Apr. 10/30		8%		
5	14,500.00	Jan. 10/31	3 mos.	7%				Jan. 27/31		8%		
6	910.50	Oct. 5/31	90 dys.	5½%				Nov. 1/31		6%		
7	1287.00	3/10/31	3 mos.	6%				13/10/31		6½%		
8	5460.00	15/7/30	60 dys.	7%				17/7/30		7%		
9	59.50	May 5/29	9 mos.	6%				May 18/29		6½%		
10	2700.00	Oct. 26/30	3 mos.	5½%				Nov. 3/30		6%		

Date.....

Name..... Class.....

EXERCISE 125

Time.....

Depositors' Ledger.

Depositor	Balance	Cheques in detail	Total Cheques	Deposits	Balance
Day A W	437 29	63 28 59 75 156 94		235 50	
Dobson W B	936 80	135 236 50 17 85		167 90	
Dutton J Jr	169 30	48 67 23 58		86 57	
East L M	536 92	356 45 69 83			
Farmer R J	1433 65	268 75 415 90 98 75		567	
Fiancial A W	237 35	69 50		19 75	
Green J W	439 50	47 95 238 72		73 25	
Hall G P		69 83 156 50		547 55	
Jones S	503 67	160 95 29 75 47 38		329 55	
Lee F	433 15			95 25	
Lawson H	798 6	56 25 93 69		235 48	
Locke E D	159 73	47 95		38 69	

How could you prove your work? Do so.

Date.....

Name..... Class.....

Time.....

EXERCISE 126

1. Add:

57869
36754
98369
67837
49853
65985
73698
25923
89446
96757
82354
67395

2. Add:

3,769.87
46,387.56
23,456.92
693,753.68
94,637.54
7,629,578.46
4,329.53
647,786.38
2,933,372.94
4,956.53
698,975.89
9,357.68

3. Multiply 369857 by 9674.

4. Divide 3769845 by 387.

5. Find to the *nearest* cent, the interest on $732.50 from Dec. 3. 1924 to March 5, 1925, at 7%.

6. Find the total of the following bill:

723 yds. @ $1.25 = ...

759 yds. @ .66⅔ = ...

672 yds. @ .87½ = ...

493 yds. @ 1.35 = ...

Total = ...

7. Find the net price of a machine listed at $375, less 20%, 8%, and 3%.

8. Find the total of

25% of $634.20 = ...

62½% of 749.60 = ...

37½% of 246.32 = ...

2⅓% of 489.00 = ...

½% of 2,000.00 = ...

83⅓% of 576.24 = ...

Total = ...

Date.....

Name.....Class.....

Time.....

EXERCISE 127

REVIEW.

1. Add:

5	7	3	8
6	2	9	4
8	3	5	7
4	7	8	6
9	5	4	5
8	6	7	3
3	8	6	8
5	9	4	8
7	8	3	9
9	4	6	7

2. Re-write and add:

52.93
724
5.686
92.853
578.3
69.75
7.548
68.32
479.5

3. Multiply: $568 \times 934 \times 968$. Product..... ....

4. Divide: 53684293 by 7982.

Quotient.....
Remainder.....

5. Simplify: $\frac{68}{85} - \frac{57}{95}$

Answer .....

6. Simplify: $\frac{3}{8} + \frac{5}{6} - \frac{1}{3} + \frac{1}{4}$

Answer .....

7 Simplify: $\frac{56 \times 72 \times 90 \times 114 \times 68 \times 50 \times 35}{49 \times 64 \times 85 \times 95 \times 27 \times 24 \times 15}$

Answer ....

8. Simplify: $423\frac{4}{15} - 268\frac{11}{18}$

Answer .....

9. Find value of $5732 \times 5732 - 4268 \times 4268$

Answer .....

10. Find value of $437 \times 437 \times 437 + 249 \times 249 \times 249 + 747 \times 686 \times 437 - 686 \times 686 \times 686$.

Answer .....

Mary Faust Sanborn

Methods of Multiplication

(1) Multiple-line method

example 336 solut.: mult by 2
842 ∴ ans. ∴ 2
∴ And ∴ ∴ 2
= final answer.

(2) Mult. by 11

example: 3 6 5 1/2 solut.: put down rt. hand no., add each 2 consec. nos., put down last no. & carry carrier.
11

(3) Mult. by nos. near 100 or 1000

7 8 3 Mult by 100, mult. 7 8 3
9 8 by 2 & subtract, result
= that of 7 8 3 by 9 8

(4) Mult. nos. near 100 or 1000 by other nos. near 100 or 1000

9 8 subtract both from 1000 &
9 9 2 put ans. beside each. Mult
these 2 together. If ans
consists of only 2 figs & zero must
be inserted as final ans. must
have 6 figs. Mult subtract &
first at bottom from straight & put
& place result beside former
3 figs obtained ie. to left.